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ABSTRACT

This monograph describes a program designed to (1) link private postsecondary vocational education with business, industry, labor, and other societal sectors and (2) establish interorganizational coordination that is beneficial to all participants. (In a companion monograph, available as CE 024 328, linkage and interorganizational cooperative arrangements are reported relevant to public postsecondary education.) The linkage program was carried out through a project conducted by the Far West Laboratory for Educational Research and Development and the International Institute of Food Industries. The monograph presents first an executive summary of the project, followed by a characterization of the situational context of the linkage programs (chapter 1). (The final report of the project is available as CE 024 329.) Chapter 2 describes the linkage model. In chapter 3 the linkage is portrayed in the form of a case study. Findings are summarized in chapter 4. Appendixes include guidelines for program design; first, second, and final drafts of the curriculum for the department of culinary arts; a facilities planning guide; and issues that have emerged and are expected to emerge, in this format: issue, motivation, carriers, and proposals. (Author/YLB)

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A MODEL FOR THE LINKAGE OF VOCATIONAL EDUCATION AT POST-SECONDARY PRIVATE SCHOOLS

AND

INDUSTRY, BUSINESS, AND LABOR

A RESEARCH MONOGRAPH

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PREFACE

This monograph describes a program designed to: (a) link private postsecondary vocational education with business, industry, labor and other societal sectors and (b) establish interorganizational coordination that is beneficial to all participants.

In a companion monograph* linkage and interorganizational cooperative arrangements are reported relevant to public postsecondary education.

The two linkage programs were carried out through a project conducted by:

- the Far West Laboratory for Educational Research and Development;
- the International Institute of Food Industries (the private educational institute); and
- the San Francisco Community College Centers (public educational institute).

The project was supported by a grant awarded by the Research Branch of the Bureau of Occupational and Adult Education of the U.S. Office of Education.**

The staff involvement of the International Institute of Food Industries and the printing of this document were provided as in-kind contributions to the project.

In the monograph we first present an executive summary of the project, followed by a characterization of the situational context of the linkage programs (Chapter One). In Chapter Two the linkage model is described and in Chapter Three the linkage is portrayed in the form of a case study. A summary of findings and a set of appendices complete the documentation of this project.

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*Banathy, Bela and others. A Model, Case Study, and Implementation Guide for the Linkage of Vocational Education Programs in Public Post-Secondary Institutions and Business, Industry, and Labor: A Monograph. San Francisco: Far West Laboratory for Educational Research and Development, 1978.

**Building Models for the Linkage and Coordination of Vocational Education at Public and Private Post-Secondary Schools and Business, Industry, and Labor (July 1, 1976 to June 30, 1978)

Building Models for the Linkage and Coordination of Vocational Education at Public and Private Post-Secondary Schools and Business, Industry, and Labor (July 1, 1976 to June 30, 1978)

EXECUTIVE SUMMARY

The project reported here was supported by a grant from the Research Branch of the Bureau of Occupational and Adult Education, Office of Education. In carrying out the project the Far West Laboratory for Educational Research and Development established coordinated relationships with (1) the San Francisco Community College Center, representing the public post-secondary vocational education sector, and (2) the International Institute of Food Industries in the Monterey Peninsula, representing the private post-secondary sector.

Based on a study of interorganizational linkage and coordination, the project focused on the design and validation of models for the linkage and coordination of vocational education at public and private post-secondary institutions with business, industry, and labor. The general procedure followed was to adapt organizational linkage and coordination models derived from an analysis of relevant research and literature. The adaptation was accomplished through the following stages: (1) describe goals, content and organizational characteristics of selected post-secondary vocational education programs and the goals, occupational programs, and organizational characteristics of identified selected organizations in business, industry, and labor; (2) determine the degree, scope, and intensity of congruence and compatibility of these groups through a comparative analysis of institutional goals, programs, and organizational characteristics; (3) design alternative configurations of program linkage and coordination, and select the most promising configuration(s); (4) construct a model for program linkage and coordination; (5) specify vocational and work experience and relevant curricula, means, methods, procedures, and resources by which to implement linkage and coordination; (6) develop specific linkage and coordination plans and make arrangements for implementation; (7) implement the program, test and assess the program's impact, and make adjustments as indicated by the assessment; and (8) report the findings.

The overall result of the project was the design, description, and documentation of models for linking and coordinating post-secondary vocational education with business, industry, and labor. The generic characteristics of the models were defined and described in order to make the models applicable for use in a variety of educational settings in communities across the nation. It is anticipated that the overall impact of the use of the models will be more understanding, capability, and willingness among personnel to create linkage and coordination of vocational education with business, industry, and labor.

Four documents were produced:

- Building Models for the Linkage and Coordination of Vocational Education at Public and Private Post-Secondary Schools and Business, Industry, and Labor: A Final Report
- A Model, Case Study, and Implementation Guide for the Linkage of Vocational Education Programs in Public Post-Secondary Institutions and Business, Industry, and Labor: A Monograph
- A Model and Case Study for Linkage of Vocational Education Programs in Private Post-Secondary Institutions and Business, Industry, and Labor: A Monograph
- Building Models for the Linkage and Coordination of Vocational Education at Public and Private Post-Secondary Schools and Business, Industry, and Labor: A Brochure

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CHAPTER I

THE CONTEXT OF LINKAGE

INTRODUCTION

This chapter provides a general characterization of efforts in Monterey County to increase educational offerings. We describe various configurations which were attempted, and define a general state of pre-linkage conditions.

It is interesting to observe that the natural course of events, initiated by simple strategies to remove barriers, generated conditions which motivated the seeking of a negotiated formalized inter-organizational arrangement. Linkage became the logical strategy to guide the various interests of participants towards their stated organizational goals.

This linkage project addressed itself to a problem which has existed in Monterey County for a considerable time— the educational needs beyond junior college can only be satisfied by a locally-operated six-year college, which, however, is financially beyond the reach of the community

To provide a solution, the Central Coast Educational Consortium (C.C.E.C.) was developed. It engaged Intersystems* with its considerable research capabilities to provide a workable plan for a school. This school must possess three major properties:

1. The widest practical subject choices of undergraduate and graduate degrees and a variety of vocational training opportunities.

2. Facilities, library, faculty and resources commensurate with high educational standards.

3. Construction and maintenance at no expense to the taxpayer and only minimal reliance on voluntary financial support or donations.

To meet with success, research had to be extended far beyond conventional models of post-secondary institutions, seeking a new alliance between all private and public sectors operating within the community. A systems concept had to be designed, which would link interorganizational cooperation of all facets of society into a functional unit. By this an arrangement can be created which, although laying no claim to being a university, can fulfill the major functions of a small six-year college, while remaining a local institution.

The following background paper is the product of a two-year research conducted by Intersystems outlining a model by which such a school can be established in Monterey County.

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* Intersystems, Inc., a private California corporation, is engaged in the development of innovative educational concepts and their implementation via the establishment of new schools offering competence-based educational systems.

A. SELF-SUPPORT AS A BASIS FOR DEVELOPMENT

A Look at the Constituency

In 1970 approximately 970 students graduated from Monterey Peninsula and Hartnell community colleges, with two-year, A.A. degrees or certificates of completion. High schools in or near Monterey County graduated over 4300 students. Thousands of men and women in professional fields such as education, nursing, business and public or social services are unable to advance without opportunity for continuing education. Also many members of the military community desire to pursue upper-division and graduate work in areas not served by the base-located teaching institutions. Frequently, large companies rate graduate-study opportunities as a prerequisite for locating in a community.

Why is There a Need for a Locally-Managed Comprehensive Post-Secondary Institution?

The need for a locally-managed educational institution which is able to offer a wide spectrum of degree programs, and is responsive to the specific requirements of the growing Salinas-Monterey area, has been recognized for many years. The University of California is too far to serve the fast-growing Central Coast area. The state university in San Jose is too far north for the convenience of local residents. Many specialized graduate degree programs have been offered, with varying success through "universities without walls," but none of them addresses the basic need for a comprehensive post-secondary occupational and professional institution.

In view of recent freezes in higher education budgets and continued voter resistance to educational funding requests, the establishment of a comprehensive post-secondary institution supported by public funds is highly improbable.

Development as a Proprietary Corporation

To fulfill the need described above the Academy of Arts and Humanities of the Monterey Peninsula was established 14 years ago. From its beginning, the Academy has been economically successful. It has proven the viability of a proprietary educational institution in the business environment of the area. Most previous attempts to establish a local college such as the Academy had chosen an economic base requiring subsidy and, therefore, fell casualty to the incredible competition for limited available funds. In spite of some difficult formative years, the concept of proprietary corporation has suited the Academy. With the investment of private capital, the school has advanced to its present standing; and by denying itself the convenience of receiving donations, it has based its growth on the merits of its educational policies, rather than its skills as a fund-raising company.

The Present Status and Program Scope of the Academy

Programs: Music, Dance, Drama, Fine Arts, Humanities, Languages, Behavioral Sciences

All programs lead to B.A., B.F.A., M.A., M.F.A. Degrees

Programs are fully approved by (1) California Office of Private Post-Secondary Education, (2) Veterans Administration, (3) United States Department of Justice, Office of Immigration and Naturalization

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A NEW CONCEPT FOR EXPANSION PLANNING

The Academy has helped design a new kind of economic alliance which will benefit educational programs, member schools and the community. It is called the Central Coast Educational Consortium (C.C.E.C.), a non-profit educational corporation. CCEC was incorporated in 1974 for the purpose of creating a modular facility centered around a joint undergraduate and graduate library and other college facilities. The facility will house selected individual degree programs, vocational training centers, business or professional courses and the Academy itself. By combining the resources and faculties of the many independent educational institutions which have been introduced to the Peninsula and Central Coast communities, the Consortium shares in building a full-scale campus. Collectively, the coordinated offerings will provide services comparable to that of a large college.

Such a campus will be advantageous to all member institutions through the framework of a comprehensive educational institution including modern library and classroom facilities. It will benefit the communities of the Peninsula and Central Coast region by offering a full spectrum of instructional programs and degrees.

A one-time specific fund-raising effort will be undertaken to establish the Consortium Library and supporting facilities.

The campus can be constructed with private investments. It will constitute a symbiosis among colleges with headquarters out of the area, the Academy of Arts and Humanities, and a number of private local schools. A community recreation center, local associations active in the arts or education, retail stores or service centers useful to the campus environment, such as a bookstore, a cafeteria, etc., may also locate there.

Thus, the CCEC campus will provide the same services and facilities found in student union centers of much larger colleges, but instead of being a financial burden to the school, will be self-supporting private enterprises. The Academy is presently studying the feasibility of this concept. Many indicators favor success for such a venture.

B. THE NEED FOR A NEW ALLIANCE

The Concept

The following is a description of a first strategy to improve local educational resources via a symbiotic approach. It was because of this effort that the need for a formalized arrangement (linkage) became paramount.

Cost Efficiency

Because of inflation and governmental pressures, administrative costs are taking an ever-rising toll. As a result, to optimize the cost effectiveness of operation supporting budgets, which once was a matter of good management, has now become a question of survival. Any number of management models have been created in the past which can be used as a basis for the community education center, but three major principles are specifically applicable:

(1) Turning over those necessary but unprofitable portions of one's business to professionals or businesses for whom this effort constitutes the source of profit.

(2) Hiring permanent employees only to the extent that workload requires, otherwise relying on part-time help.

(3) Multi-purpose use of equipment and facilities. For example, a press room, computer center, typing pool or even a library can serve as a classroom as well as an administrative resource.

Sharing

The basic design of the community education center closely resembles the operation of a conventional shopping center– with one major distinction. Whereas, in the shopping center, tenants are sharing little beyond a common landlord and a mutual security and public relations budget, participants in the education center combine into an operational and administrative symbiosis. Members will be carefully selected so that the presence of each will bring a vital contribution to the whole, in turn receiving from the center a perfect environment of their own operations. Sharing will extend through the entire spectrum of business operations, permitting investments in the latest managerial technologies.

Education, a Local Industry

The instructors and staff of the Defense Language Institute and the Naval Postgraduate School combine with the large number of retired people to create a unique chemistry of available part-time or full-time faculty. When this is added to the available personnel of local junior colleges, high schools, plus University of California in Santa Cruz, it creates a resource of human knowledge capable of attracting attention far beyond local boundaries. The inclusion of dormitories at the community education center will allow students from outside the area and even from foreign nations to come here. This influx of students will be beneficial both to private and public educational institutions in the

community, especially for those whose charters do not permit advertising outside their service area. It will allow operations on a much larger scope and create new employment opportunities for the teaching profession. It contributes to the already-considerable cultural reputation of the local area and lend a cosmopolitan flair to the campus.

Investor Funding

Land and building development will be conducted by a privately-financed tax-sheltered "Community Development Corporation." Besides a carefully-designed moderate profit motive, it will offer the added incentive to invest in the educational future of the county. The CCEC will sign a master lease with this corporation, subleasing to schools and non-profit corporations. Companies invited to join as tenants will be carefully evaluated to provide a healthy balance between traffic, service, and profit-generating activities to assure a stable business climate. By this approach, the major costs of creating and maintaining the campus are separated from fund-raising activities.

After summarizing the state of post-secondary education in Monterey County, it became apparent that three major needs existed:

(1) Augmentation of existing junior college, two-year programs by adding two upper division years, leading to B.A./B.S. degrees.

(2) Creating a school with local bias, to provide university-like study opportunities leading to B.A. and M.A. degrees.

(3) **To widen and intensify the scope of vocational training programs** with special sensitivity to local training and employment requirements.

It became equally self-evident that conventional funding means were totally inadequate to create or support such institutions. It was the realization of this fact which motivated the **seeking of a new alliance, involving all sectors of the community in the planning and development of educational entities.** Because of its obvious relevance to the tourist industry in Monterey County,* the International Institute of Food Industries was chosen as a first project. Quickly the involvement of the private sector could no longer be directed efficiently toward the stated goals, **without a formal, negotiated arrangement to coordinate the multitude of efforts and interests.**

It was at this stage that Far West Laboratory and Intersystems, Inc. decided to join forces to further individual and mutual objectives. Intersystems** needed a streamlined, effective communication ladder to advance the development of its schools; Far West Laboratory required an actual school in its formative stage to develop the model of formalized private sector/educational institution linkage arrangement. Each organization considered the services rendered by the other as sufficient reward to be considered an in-kind contribution, and the joint project was initiated November, 1977.

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* Monterey County and specifically the Salinas Valley is a major agricultural center ; food processing industries such as Nestle's, Peter Paul, Schilling Spices, etc. are also located there. Monterey and Carmel are renowned resorts and tourism necessitates a large number of food service establishments and hotel/motel inoustires. Santa Cruz, Moss Landing and Monterey are fishing harbors and a number of aquaculture industries are also located there.

** As explained earlier, Intersystems assumed the responsibility (for the Central Coast Educational Consortium) to design a comprehensive post-secondary educational program. The key component of this program is the Academy of Arts and Humanities and the International Institute of Food Industries will operate under the umbrella of the Academy.

CHAPTER II

THE MODEL

INTRODUCTION

The Process Model described next has emerged as most applicable to the linkage program described in this monograph. The Model is an adaptation of various linkage concepts and configurations that were studied and the summary of which is presented in the Appendix attached to this chapter.

The Model is structured in five stages:

- Orientation Stage
- Intra-Organizational Evaluation
- Inter-Organizational Design
- Implementation
- Evaluation

The five stages are further elaborated in ten steps. For conclusion the functional contexts of the application of the Model are identified. Since the formality of a presentation is a vital ingredient in generating credibility for the initiating institution, where possible, materials are displayed in the same format as they were presented to participants.

A. A DESCRIPTION OF THE MODEL

ORIENTATION STAGE: Analysis of the nature of coordination and its task environment.

Step 1: **Definition of the area of interest.** This step examines the need for inter-agency coordination and defines the common concern among organizations.

Step 2: **Specification of territoriality.** Define and clarify the geographical boundaries and location(s) for the proposed coordination.

Step 3: **Identification of Relevant Organizations (Preliminary Organizational Set).** The criteria for relevancy would include organizations such as:

- Having a high degree of organizational involvement or commitment to the purpose of the area of interest – similar or complementary goals, activities, etc.
- Representing a potential of needed resources.
- Needing the resources that the focal organization possesses.
- Representing or having access to client systems served by the proposed interorganizational coordination.
- Having potential sources of legitimation or prestige.
- Possessing the potential of moving from independent or negative competitive situations to one of interdependence.

These three steps have been written from the perspective of the initiating organization. There are two polar strategies that can be adopted to generate interorganizational coordination. One approach is for one organization to develop the coordination activity and "sell" it to the participating organizations. The other would be to include all organizations in all decisions. Between these extreme boundaries a wide range of strategies are available .

INTRAORGANIZATIONAL EVALUATIONAL STAGE: Organizations tentatively determine whether to participate. Final determination is usually made when formalized negotiations occur.

Step 4: **Intraorganizational commitment to the area of interest.** At this point it is important to determine each organization's commitment to the proposed activity and its level of priority.

Step 5: **Intraorganizational commitment to Interorganizational Coordination within the area of interest.** It is important that the participating organizations share a commitment to interdependence and coordination as a way to achieve success.

LEGITIMATION STAGE: Organizations indicate their formal approval of interorganizational coordination.

Step 6: **Agreement on Goals within the area of interest.** This step involves a more detailed analysis of the problem and specification of goals for coordination

Step 7: **Agreement and Commitment on the Means to be used to accomplish the Goals.** This may be the longest and most difficult task to accomplish. It involves specifications of the general strategies and actions to be taken, resources needed, who will provide these resources, time sequence, and schedule, the structural organization form under which coordination will be carried out, budgeting and evaluation procedures.

Step 8: **Formalization of the Negotiated Agreement.** Organizational commitments should be recorded in a formalized, written agreement. This agreement will also aid the implementation process.

IMPLEMENTATION STAGE:

Step 9: **Implementation.** If the previous steps have been carefully negotiated, implementation can be fairly simple.

EVALUATION STAGE:

Step 10: **Evaluation.** Although this has been listed as the final step, evaluation must occur throughout the process. As a task, evaluation entails obtaining information about outcomes and arrangements and procedures that bring about outcomes, such as:

- the processes used in securing coordination.
- the coordination structure.
- the adequacy of individual organization performance within the negotiated agreements.
- an assessment of the costs and benefits.
- the adequacy of the organizational set (group of participating organizations) involved.
- the potential for additional coordinated activities

A Linkage Tool

This questionnaire was introduced during Step 6 in order to develop information needed to determine interest for involvement.

Organizational Questionnaire

Because of the diversity of organizations sharing in this project, it would be too cumbersome to design a questionnaire equally addressing all participants. Please use this page as a guideline, but feel free to adapt these data in any way you find suitable.

I. Description of Organization:

Please list services or products offered by the organization.

II Description of Basic Operations:

Please describe in general terms activities performed by yourself, your associates or employees in:

- administration
- production
- marketing
- other

III Description of Employees' Qualifications:

Please outline special professional requirements for your employees, as they relate to the training objectives of this school.(You may distinguish between available and desired competency levels.)

IV. Definition of Gain:

Please provide some concepts of how your organization could gain from the existence of a school such as this.

- directly
- indirectly (by contributing to the industry as a whole.)

V. Training Resources:

Please list physical and personnel resources your organization might make available for training.

B. THE FUNCTIONAL CONTEXTS OF THE APPLICATION OF THE MODEL

Two departments of the International Institute of Food Industries served as the contacts for the application of the model. These departments are briefly described below.

Department of Culinary Arts: four major classifications of linkage participants are

(1) Chefs owning their own restaurants.

(2) Chefs employed by hotels, restaurant chains, or large independent establishments.

(3) Food specialists such as bakers, butchers, etc., owning their own shops.

(4) Specialty food and wine merchants and catering specialists.

Department of Fisheries and Aquaculture: ten major classifications of linkage participants are

(1) Fishing boat owners

(2) Cannery owners or managers

(3) Labor representatives

(4) Harbor masters

(5) Fresh or salt water fish farms

(6) Shipbuilders and riggers

(7) Waste processors

(8) Special maricultural industries

(9) Fish and sea product wholesalers and retailers

(10) Federal and state governmental agency representatives

NOTE: The overall purpose of bringing together the above organizations in a linkage design effort was to create a linkage model by which to design two post-secondary vocational education programs.

APPENDIX

A Summary of Linkage Concepts and Configurations

In this appendix we (a) define linkage, (b) present key concepts, define the role of the independent linkage agency, (c) identify other linkage roles, and (d) speculate about costs and benefits. Finally, the three major procedural dimensions are displayed.

A. DEFINITION OF LINKAGE

Linkage is a negotiated, authoritative arrangement between organizations whose internal components allow for a mutual coordination and/or exchange of resources or activities. It is designed for the purpose of achieving each organization's, as well as mutually defined, goals and objectives.

The definition implies that linkage is a conscious process requiring the formal sanction of the participating organizations and the explicit detailing of goals and objectives. While linkage activities must satisfy some portion of each organization's needs or goals, inter-organizationally they **do not have to be identical.** For the formal educational system, linkage activities can satisfy educational or instructional goals; for other participants, linkage activities can satisfy a wide variety of goals including those that are production or performance oriented.

For instance, a linkage arrangement between an occupational education program and a local industry involving the planned integration of the industry's facilities into the curriculum may satisfy a different set of needs for each organization. The occupational preparation arrangement may satisfy a need for obtaining an additional, relevant curriculum resource; the industry may be satisfying a need for trained personnel.

In addition to satisfying each organization's goals or needs, the design of the linkage process requires the explicit setting of goals and objectives for itself, and the procedures and structures to meet them.

B. ORGANIZATION CONCEPTS: HOLISM AND TRANSFORMATION

We propose two organizing concepts which will guide our development of linkage in an educational setting. The first is to view linkage "holistically." As organizations engage in linkage, decisions made on one level effect other levels within the organizations. Though only one component of an organization is involved in linkage related activities, the whole organization is effected. Moreover, characteristics of the organization and the environment in which each organization operates will effect the linkage process.

One final, important consequence is that conflict may occur in the linkage process. Conflict can be expected to arise because each organization is operating independently with its own needs, goals, and methods of operation. It is not necessarily to be avoided, but can be a vitalizing force if the procedures are designed to anticipate and deal with conflict.

The second concept involves linkage as a **transformation process**. As indicated earlier, linkage entails a negotiated, authoritative arrangement between organizations. This arrangement may result in a transformation of structures, personnel, functions, or resources of each organization. Transformation is necessary if the linkage activity is to lead to a formalized cooperative arrangement sustained on a permanent, continuous basis. Without this transformation, linkage type activities will continue in an informal ad hoc fashion.

C. ROLE OF INDEPENDENT LINKAGE AGENCY

Up to this point, we have suggested that linkage occurs between two or more independent organizations with overtures to linkage initiated by one organization and transmitted to another. As an alternative, linkage would be facilitated by a third party; an independent, neutral organization. Although there is little precedent to linking organizations for educational purposes, it is more common in the health care and social welfare delivery systems.

For the purpose of designing curricula, goals, and objectives of the International Institute of Food Industries' Department of Mariculture, the Far West Laboratory for Educational Research and Development (Bela Banathy, Ph.D., project chairman) is assuming the role of an independent linkage agency. The Laboratory is pursuing a federally financed project, and its services are available to the community free of charge.

D. ROLES IN LINKAGE RELATED ACTIVITY

Although linkage is occurring between organizations or institutions, it must be understood that the actual decision-making is carried out by people. These people represent institutions which they commit beyond their personal capabilities. When a third party enters the picture, other individuals become involved, suggesting that two distinct categories of participants share in the linkage process.

Boundary Personnel: These individuals represent the participating organizations and are designated as the authority to exceed each organization's boundaries in negotiating the linkage process.

Linkage Facilitator: The linkage facilitator represents the third party initiating and maintaining the linkage arrangement. The facilitator possesses the skills to analyze organizations, design linkage arrangements, and provide the framework for implementation. The linkage facilitator may also provide training for boundary personnel.

E. COSTS AND BENEFITS OF LINKAGE

There are a number of benefits and barriers to be considered in the linkage process. Following is a list developed by Beal and Middleton* adapted to illustrate these conditions from an educational

*Beal, G., and Middleton, J. Organizational Communication and Coordination in Family Planning Programs. Honolulu, Hawaii: East-West Center, 1975.

institution's perspective. Any one of these may provide motivation to enter or avoid linkage. These must be facilitated by a third party.

1. **Potential Benefits**

   a. Maximize or expand resource base. (Resources may include money, physical facilities, equipment, supplies, curricular materials, services, administrative and instructional staff, para-professional, volunteers, and available knowledge and skills.)

   b. Reduce duplication of programs or activities.

   c. Enlarge scope of present programs.

   d. Reach new and different groups of students.

   e. Create more effective programs – with more impact on students.

   f. Coordinate and integrate each organization's input into larger programs with greater impact.

   g. Eliminate mistrust, competition, or conflict.

2. **Potential Barriers**

   a. Loss of some autonomy.

   b. Required time and energy to initiate and maintain linkage.

   c. Creates necessity to exactly determine benefits.

   d. Creates potential to cloud accountability for success or failure.

   e. Exposes organizational weaknesses.

The barriers and benefits outlined in the above section pertain most directly to formal education/training systems. It should be noted that additional barriers and/or benefits may relate more directly to the industries participating in linkage. For example, in a vocational education arrangement, an important benefit might be the possibility of obtaining potential employees not requiring extensive training. On the other hand, barriers may include possible difficulty with labor unions on apprenticeship programs or exposure of innovative techniques that help maintain the industry's competitive position. The **linkage facilitator** must be able to analyze such conditions, and suggest remedial strategies.

II. STEPS IN THE LINKAGE PROCESS

In outlining the procedural model from the perspective of the **linkage facilitator**, particular attention has been paid to including two categories of operations: coherence and adaptability. **Coherence** defines the clarity and utility of operations purposefully directed to a pre-specified end. **Adaptability** includes the sensitivity of operations to new data or needs enabling the structure to adjust or regenerate without losing power.

THREE PROCEDURAL DIMENSIONS

A. PRE-LINKAGE ACTIVITY

1. Define problem.
2. Specify set of organizations with potential to solve problem.
3. Meet with organizations to obtain interest.
4. Determine which organizations will participate and obtain commitment of organizations to enter linkage negotiation.

(I) *5. Arrange for group meetings with boundary personnel.

B. LINKAGE ACTIVITY (carried out in group meetings with boundary personnel)

1. Outline linkage approach and roles (conduct any training needed).
2. Obtain domain consensus.
3. Outline general task environment of each organization
   a. goals
   b. resources
   c. functions/activities
   d. structure
4. Analyze specific task environment of each organization relative to linkage problem
   a. goals/objectives
   b. resources
   c. functions/activities
   d. structure

(II) 5. Specify any constraints, limitations, or unique situations which may effect linkage process.

6. Based upon previous discussion, facilitator designs one or more linkage configurations. (Note: This activity can be carried out by facilitator independent of larger group.)

(III) 7. Select one or more linkage configurations for implementation.

8. Agree upon goals/objectives for each implementation configuration.
9. Specify and agree upon structures, roles, and responsibilities needed to attain goals and objectives.
10. Agree upon standards for quality of linkage program.
11. Set up communication/feedback channels needed to implement linkage and to monitor progress.

(IV) 12. Set up evaluation parameters and procedures.

13. Implement linkage activity.
14. Provide evaluation feedback (formative and summative).

(V) 15. Adjust linkage configuration as required.

C. FORMALIZED COOPERATIVE ARRANGEMENTS

The initial cycle of the linkage activity, after final adjustment, should lead to the formalized cooperation between participating organizations. As a final step, the linkage facilitator may withdraw as an integral part of the arrangement.

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*(I) - (V) indicate milestones.

CHAPTER III

CASE STUDY

INTRODUCTION

To fully benefit from the experiences of this project, it must be understood that two disparate courses of action were initiated. The purpose was to reverse the effect of one on the other during the development. At first, the goal was to create a linkage system which required the formation of a school as a raison d'etre; later on, the development of the school became the objective to which the linkage system was applied. Somewhere in the development an **Inversion Point** had to be reached at which the catalyst became the goal and the goal the catalyst. Evaluation of the effectiveness of strategies is achieved by first rating the impact of the school as a stimulus (catalyst) on the linkage design. After the inversion point, the impact of the negotiated linkage agreement (catalyst) on the development of the school becomes the measure.

It must be observed that for the purpose of this study **the development of the linkage model was the primary objective**, but when the linkage model is replicated elsewhere, it will be done for the purpose of developing or improving an educational entity. Linkage as an invigorating vehicle for education is not an end unto itself, but a means to an end. Therefore, its effectiveness should be measured by the benefits it imparts. Events reported will reflect this duality of purpose before and after the inversion point.

This chapter is presented in two parts. First, the substantive events are displayed and are followed by an analytic case study.

A. SUBSTANTIVE EVENTS

In this first part of the case study we introduce a "map" of substantive events in order to help the reader to gain an overall perspective on how the linkage design was instrumental in school development of creating two post-secondary vocational education programs.

The program chart on the next page displays the "macro-ways" to linkage and phase development, while the map of substantive events elaborates the macro-ways.

1. PROGRESS CHART

SCHOOL DEVELOPMENT				LINKAGE			
				A pre-development inter-organizational dialogue may occur in some cases.			
CONCEPTUAL	1	Formulation of Need	PROGRESS OF SCHOOL DEVELOPMENT AND IMPLEMENTATION	1	NEED DEFINITION	Identification of Need for Formalized Inter-organizational Relationships	PRELINKAGED STATE
	2	Formulation of Ideal Solution		2	FIRST DIALOGUE	Publication of Goals and Objectives	
	3	Projection of Desired Outcome		3		Curriculum Proposal	
	4	Identification of Barriers		4		One-to-One Meetings Define Relevance to Participants	
	5	**Milestone One: First Transformation** Statement of Ideal Concept, Goals and Objectives		5		**Milestone One: Criteria to Motivate Participation in Linkage Process**	
ORGANIZATIONAL	6	Systems-wide Resources and Facilities Planning Criteria		6	LINKAGE FOCUSED EFFORTS	Definition of Area of Interest	ORIENTATION STATE
	7	Selection and Implementation of Suitable Operational (Corporate) Mode		7		Specification of Territoriality	
	8	Financial Criteria and Objectives		8		Identification of Relevant Organizations	
	9	Capital Development		9		Mode of Recruiting Participants	
	10	**Milestone Two: Second Transformation** Statement of Viable Concept		10		Identifying Barriers to Participation	
				11		**Milestone Two: Strategy to Facilitate Cooperation**	
				12		Commitment to Area of Interest	INTRA ORGANIZATION
				13		Commitment to Inter-Organizational Coordination	
				14		Organizational Questionnaire	
				15		Definition of Negotiable Areas of Autonomy Loss	
		Inversion Point ←		16		**Milestone Three: Definition of Perimeter of Coordination** → *Inversion Point*	
OPERATIONAL IMPLEMENTATION	11	Design of Education Relevant School Activities		17	EDUCATION FOCUSED EFFORTS	Agreement on Common Goals	LEGITIMATION & IMPLEMENTATION
	12	Design of Industry Relevant School Activities		18		Agreement on Means to Accomplish These Goals	
	13	Task Analysis and Competence-Based Curricula Design		19		Agreement to Achieve an Integrated Design	
	14	Educational Systems Development					
	15	**Milestone Three: Metamorphosis** Statement of Marketable Concept					
	16	Selection of In-School Facilities and Industry Training Resources		20		**Milestone Four: Formalizing the agreement for Sustained Integrated Collaboration**	
	17	Choice of Faculty, Administration and Staff					
	18	School Approval by Authorizing Agencies					
	19	Publication of Catalogue and Student Recruitment Efforts					
	20	**Milestone Four: Reality** First Classes are Taught					

NOTE: Evaluation, which was the fifth stage of the original process model, was treated as an ongoing procedure and, therefore, not listed as an individual step.

2. MAP OF SUBSTANTIVE EVENTS

*	+	Department of Fisheries	Department of Culinary Arts
		No pre-development dialogue existed. Activities were stimulated by initiating organization.	Pre-development dialogue took place defining local need for professionally-trained restaurant personnel.
1	1	Need was identified by observing and evaluating a primarily family-operated local fishing industry which has not kept pace with time.	Need was defined by members of the industry, and the requirements for a more than casual co-operative arrangement was voiced. Therefore, the departments of culinary arts and fisheries were chosen as opposites in the linkage model project.
2 3 4 5	2 3	An "ideal" solution, general goals and objectives were defined and published to serve as a stimulus for industry representatives to enter a dialogue. A preliminary list of target participants and local resources was prepared. (Appendix A)	A first curriculum draft was designed to serve as a stimulus for participation. It was presented to local members of the industry in December, 1977 and created substantial early interest to enter dialogue. (Appendix B)
	4	A series of one-to-one meetings with industry members produced a division of opinions ranging from guarded consent to refusal to participate. Interest in the project parallelled the educational background of individuals. Barriers to linkage were identified.	One-to-one meetings with chefs and restaurant owners produced enthusiastic support, an enlarged list of proposed participants and a first outline of industry needs and educational efforts in other cities and states.
	5	After analyzing barriers, a first strategy to motivate dialogue was devised, carefully defining commitments to "one step at a time." First commitment to attend **one** meeting and discuss merits of starting a department.	No need for special motivating strategies arose, since the process was a response to industry initiative.
	6	Area of interest was accepted, but some interest was generated by having culinary department assistance in marketing and developing new fish products. (First Meeting, early February)	Area of interest was pre-defined, but became augmented by overall concept of Institute of Food Industries, to include agriculture, fisheries and industrial food processing. Strong response to concept of of inter-departmental/industrial cross fertilization.

*School Development +Linkage NOTE: Numbers parallel those from the Progress Chart

*	+	Department of Fisheries	Department of Culinary Arts
	7	Territory for operations was accepted to be Monterey Peninsula; for student recruitment, no boundaries were set.	
6		A framework for systems-wide facilities and resources planning was developed. (Appendix C)	
7 8		The Institute is to be a limited partnership. First set of financial criteria developed while operating under Intersystems, Inc.	
9		Capital development is deferred until after the first term is taught (end of Intersystems umbrella).	
	8	A revised list of proposed participants was developed at first meeting, involving aquaculture industries.	Criteria were developed measuring the relevance of the department to distant industries not self-evidently attracted to its services.
	9	Participants were recruited one-to-one by initiating institution.	Contact mode remained one-to-one but industry members began to recruit.
	10	Barriers were identified by participants as problems the industry is experiencing in terms of regulatory efforts and marketing. The initiating institutions identified the major barriers to a cohesive linkage participation and proposed a school which could aid the industry in problem solving.	The primary barrier to participation was time.
	11	Self gain by each member of the industry in exactly definable terms emerged as a functional strategy for continued cooperation.	Industry initiative precluded any need for extended motivational strategies.
10		No revision of the original plan was possible at this stage, but an organizational questionnaire was distributed.	After a number of small group consultations, the initial curriculum was revised, academic regulations and a modular calendar were added, including extensive student cost and facilities planning guidelines.
	12 13	Fear of having processes copied, loss of autonomy, and inability to see possible gain were the main barriers. But general dissatisfaction with the state of the industry generated receptivity to view school integration with the industry as potentially beneficial.	Since a majority of chefs were also restaurant or store owners, intra-organizational commitment was present since the beginning. It was expressed verbally at various stages of the development; inter-organizational coordination is common in the industry.

*School Development +Linkage NOTE: Numbers parallel those from the Progress Chart

*	+	Department of Fisheries	Department of Culinary Arts
	14	The organizational questionnaire provided vital data about the diversity and complexity of fish (seafood)-related industries. It served as a document for curriculum revision and revising all motivational strategies.	The organizational questionnaire revealed very little about the industry, because of the basic sameness of most food service operations.
	15	Loss of autonomy was generally described as unacceptable, except in insignificant areas. Collaborative commitments would have to be evaluated on a case-by-case basis.	A set of criteria was devised which evaluated loss of autonomy opposite financial gain. The finality of a commitment was the prime determining factor.
	16	Participating industries agreed to a coordinated effort of designing a school which, as part of its operation, can actively participate as an industry problem solver. If this was achievable, sustained coordination and a marginal integration with industry would be possible.	Industry members agreed to aid in curriculum and general school design, serve as faculty, accept apprentices and monitor the school's performance.
		INVERSION POINT WAS REACHED.	
11 12	17 18 19	Responding to the pressure of the preceding item, the school design was re-examined, and a new structure developed. It divided school activities into two basic categories– education relevant and industry relevant. This design required a part of the school to become a satellite to the industry.	When the material designed in the department of fisheries was transferred to culinary arts, it became an immediate basis for re-negotiating autonomy versus interdependence. It resulted in a design which completely integrates this department into the local restaurant industry.
13		With sustained coordination assured following the universal acceptance of the integrated design, a pilot program to commence in Fall Term, 1978, was agreed upon. Task analysis for this program serves as a basis for a revised design of the entire department.	Task analysis as a basis for competence-based curricula has led to a re-evaluation and complete re-development of educational programs. A new curriculum was drafted for implementation in Fall, 1978. (Appendix F)
14		Educational systems development is confined to the pilot program until the final integrated design of the department is complete.	Educational systems development is taking place one year at a time in advance. This mode is sensitive to learning from the experiences of implementing the curriculum.

*School Development +Linkage NOTE: Numbers parallel those from the Progress Chart

*	+	Department of Fisheries	Department of Culinary Arts
15		No final materials available.	The department's programs and operational structure were transformed to become a partial industry subservient to its major industries. This change is benefiting its instructional programs, the students and participating businesses.
16 17 18 19 20			Facilities to start operations are chosen, faculty and staff are recruited, school approval by the California Office of Postsecondary Education is forthcoming and a catalogue and recruitment materials will be available in August, 1978.

*School Development +Linkage NOTE: Numbers parallel those from the Progress Chart

B. ANALYTIC CASE STUDY

1. GENERAL OBSERVATIONS

Since the following case study is to serve as a "recipe" for the linkage process, it is important to re-examine the conditions which led to its implementation in Monterey County and to anticipate a number of prerequisites.

The area's major industries are related to the production, processing and marketing (serving) of food, thus, providing the communities' largest and most varied source of employment; yet no central training facility existed in the area supplying the required education. The International Institute of Food Industries was created to fulfill this function and its inceptive efforts concentrated on the two areas where local educational neglect was most visible– training of restaurant personnel and training for an antiquated local fishing industry. The indicators that a formalized arrangement had to replace an informal dialogue were as follows:

- Industry-wide practicipation requiring group meetings.
- Criticism of the industry regarding effectiveness of in-school programs.
- Large variation of training needs for different types of jobs.
- General dissatisfaction with qualifications of currently available hired help.
- Industry-wide labor shortage causing frequent help turnover because of advancement.
- Considerable local interest in jobs but no training source.
- Little available capital to start a school.

Without active and sustained involvement of the industry's knowledge, resources and efforts, none of these points could be adequately resolved, even if unlimited financial resources were available; therefore, the Institute participated in the creation of a formal, negotiable mode of interaction– linkage.

Two alternate start-up modes were identified:

One: (as in the Department of Culinary Arts) where a pre-linkage dialogue between all or some component elements precedes the linkage process. In this case, the formal arrangement evolves in response to a commonly recognized need, and requires little or no "salesmanship" on the part of the initiating organization.

Two: where the linkage process becomes the motivator for industry involvement. During this case study the Department of Fisheries and Aquaculture served as an example for this procedure, and it was here that most of the barriers to linkage were encountered. As a result, it is interesting to observe that the Department of Fisheries contributed most to the advancement of the linkage process as a model, yet benefited internally only toward the end of the project. The Department of Culinary Arts contributed little to the linkage model, but benefited considerably from its application.

A few universal barriers were identified which evolved to be of such importance that they must be dealt with in advance, unless the entire venture be placed in jeopardy.

- **MONEY**: If, at any time, it appears (even unintentionally) that the linkage process is, in fact, a guise for a covert fund-raising venture, the entire project will collapse.

  Solution: The only way this can be prevented is to be totally candid about it. Financial matters should be discussed openly, but stress should be made that no request for funding will be forthcoming.

- **INTIMIDATION**: The jargon and apparent complexity of educational systems can be bewildering for anyone outside the educational community.

  Solution: Conference management and the preparation of printed materials must, therefore, be responsive to its targeted users. Simple language should be used, and words like "proposed," "suggested," etc. are to precede all major statements to prevent an aura of unwanted authority which could arrest creative participation.

- **TIME**: It is the key to linkage efforts. Participants will contribute, but if abused, it will become the major deterrent for a sustained effort.

  Solution: Small meetings should be used whenever possible; small groups (3 to 6 people) are easier to schedule than large ones and often more dynamic. At all times, the courtesies of good preparation, efficient conference management, starting and ending on time, and meticulous follow-up are the prime ingredients in continued interest.

- **GRADUAL COMMITMENT**: Industry representatives faced with entering a relationship which, at first, contains many unknown and strange elements usually display a healthy amount of reticence.

  Solution: By requesting only a marginal commitment to explore the idea and allowing a re-commitment as each new milestone is reached, the start-up deterrent is removed.

A number of basic attitudes should prevail from the very beginning. Since the linkage process is essentially designed as a vehicle to create change in all component elements, it is the primary task of the initiating organization to project willingness to undergo transformation. The roles played by all participants must be clearly defined (especially the one of the neutral linkage facilitator), and a general mood must prevail that everything under discussion is subject to change. Once this major point is understood, participants can be candid about their goals and creative about discussing new organizational arrangements. The language of the initiating institution's representative must carefully draw attention to the fact that this is "their" project, "their" school, "their" responsibility as much as "ours." To introduce a gentle note of accountability for the success of the venture is useful at a very early stage.

The first set of goals under discussion should be, "What's in it for me?" It is important to realize that the only measure of the success of a business is in its profits. Therefore, no matter how intrinsic the value of a linkage project may be, benefits must be translatable into tangible outcomes to foster a sustained coordinated effort. The sooner these criteria are discussed and classified, the better, even at the risk of losing a few early participants.

The first organizational efforts should be focused on two major goals: (1) to generate credibility for the project, and (2) to stimulate creative participation. The first list of participating organizations should, therefore, be leaders in the industry, business and labor and starter materials should be designed to motivate change rather than overwhelm with their apparent completeness.

During the early stages, the project is more vulnerable to negative influence from participants which, for the first two or three large meetings, should be wisely prescreened regarding attitudes to the project and conference behavior. Whereas later in the development, conflict can be an invigorating ingredient, too much of it too soon can be ruinous. A "trigger concept paper" is very useful since it places a work document into members' hands, opens a file on the project, and conveys a summary of Milestone One– a statement of the ideal concept. It also creates credibility and inspires confidence in the initiating institution.

2. PRE-LINKAGE ACTIVITIES

From late summer, 1977, the project staffs of the Far West Laboratory and Intersystems held a series of meetings. These meetings led to:

- the FWL project staff's understanding of the educational development efforts of Intersystems, and
- Intersystems' understanding of the linkage concept and the methodology of linkage design

The "linkage" created between Far West and Intersystems was a necessary preliminary step tow the initiation of the linkage program described next.

3. LINKAGE ACTIVITIES

ORIENTATION STAGE

Time Span: February 3 to March 11, 1978

Number of Meetings:			
	One-to-One	(Fisheries: 16)	(Culinary Arts:12)
	Group	(Fisheries: 2)	(Culinary Arts:1)

Goals: Linkage Focused

(1) Definition of area of interest.
(2) Specification of territoriality.
(3) Identification of relevant organizations.
(4) Mode of recruiting participants.
(5) Identifying barriers to participation.

Milestone One: Strategy to facilitate cooperation

School Design:

Fisheries:
Systems-wide resources and facilities planning criteria

Culinary Arts:
Systems-wide resources and facilities planning criteria
Student cost calculation
Equipment and facilities analysis
Academy regulations draft

ORIENTATION STAGE

Barriers:

Fisheries:

Time available
Social/Group image
Fear of financial demands
Fear of revealing trade secrets
Exaggerated sense of autonomy
Inability to respond to group dynamics
Problems facing the industry
Skepticism about school being a solution

Culinary Arts:

Time available
An apprenticeship program feared to be competitive

Narrative:

Department of Culinary Arts (Commencing February 3, 1978)

At this time, the first model of the linkage concept was available and introduced on a one-to-one basis to participants. The response was pragmatic, "We need it.....it's a good idea.....tell us what to do." The idea of linkage being innovative generated no enthusiasm at all. Attitudes universally were, "We need a school.....if linkage is the way to do it, let's get on with it." As a result, the model was implemented so smoothly that its benefits remained latent until the first major barrier was encountered. An apprenticeship program sponsored by the "American Culinary Federation" was to be implemented in the area and some chefs felt the school would be in direct competition. The program had previously encountered resistance from the union and was surrounded by much uncertainty; furthermore, to add to the conflict, most chefs agreed that the school, as well as the apprenticeship program, had merit. Suddenly, linkage became apparently the communication vehicle to sort things out. The area of interest became redefined in terms of individual attitudes, organizational relevance was examined in terms of contributions to the two programs, rather than gain, and needs were converted into goals. The in-school program was redesigned to include one externship (apprenticeship) term in any three and a strategy was designed to combine the American Culinary Federation program with the schools.

Department of Fisheries (Commencing February 8, 1978)

Attendance at the first meeting was random choice of industry, government and labor. No pre-screening was possible and measured against commitments, turnout was small. An agenda was prepared but kept returning to one main topic – problems besetting the industry. The fishing industry, as well as the California Fish and Game and the U.S. Coast Guard were represented; it was difficult to reach a constructive attitude. The concepts of linkage and task analysis were presented and discussed, but only a very neutral commitment to continue could be extracted. The most constructive presentation of barriers came from the labor representative who provided a list of people to contact and the Moss Landing harbor master, who did likewise. The meeting concluded with a mild assertion to continue. Because of individual time requirements, one-to-one meetings became the major mode of discussion; this way some of the barriers became resolved. The individual visits adjusted to personal convenience (inability to act in group situations was no factor). Fear of financial demands was stilled and the social/group image "in case this thing doesn't succeed" became less of an issue. Revealing trade secrets was a point of near paranoia with some members and was shelved, but interestingly, every person visited revealed in their own way their concern about a troubled industry. It was this aspect, which repeated over and over, became the central point of a strategy to convert barriers into vitalizing forces. After a series of pedestrian meetings, it became clear that the only strategy to facilitate cooperation was to find a common denominator. This was obviously the problem besetting the local industry, ranging

from inability to market certain fishes to governmental regulations, foreign intrusion and changing the name of anchovies. The agenda for the next group meeting was, therefore, devised to address these problems and explore avenues by which a school could assist. This moved the school to the industry and into a realm different from the initial concept, but it appeared to be the only alternative to advance to the next step of linkage design.

Solutions to Barriers:

Fisheries:

Individual meetings
Openness about process
Converted into a motivating force
Using confidence of peers to dispel doubts

Culinary Arts:

Individual meetings
Integrating apprenticeships into school programs

Results:

- A motivational strategy to continue cooperation
- An open window into new school/industry interaction

INTRA ORGANIZATIONAL EVALUATION

Time Span: March 11 to May 20, 1978

Number of Meetings:	**One-to-One**	(Fisheries: 23)	(Culinary Arts: 16)
	Group	(Fisheries: 2)	(Culinary Arts: 1)

Goals: Linkage Focused

(1) Intra-organizational commitment to area of interest.
(2) Intra-organizational commitment to inter-organization coordination.
(3) Organizational questionnaire.
(4) Definition of negotiable areas of autonomy loss.

Milestone: Definition of perimeter of coordination.

Barriers:

Fisheries:	Culinary Arts:
Inability to respond to group needs	None
Inability to abolish old concepts	
Fear of revealing trade secrets	
Exaggerated sense of autonomy	

School Design: A viable (but conventional) concept in both departments.

Narrative:

Department of Culinary Arts

An intra-organizational commitment to the area of interest and inter-organizational coordination was present since the very beginning of the process. Chefs belong to professional organizations, rely in many ways on each other for certain products and communication and inter-dependence is an accepted part of the industry. In defining areas of autonomy loss negotiations centered on three major areas: (1) profitability of the exchange, (2) reliability, and (3) durability of the relationship . The perimeter of the coordination was summarized as a willingness to explore any alternative which can result in higher profits without loss of existing quality. Procedurally, proposals would be submitted to the monthly chefs' association meeting where they examined and accepted or rejected. No specific criteria were defined. Regarding the school design, chefs would assist in creating curricula, work with task analysis personnel to create competence-based instructional systems, serve as faculty, advisors, or accept apprentices from the school. They would aid in recruiting students, hire graduates and perform an ongoing monitoring effort to make certain that the school's performance remained in keeping with its stated goals. They would perform these functions as individuals or in coordinated groups.

Department of Fisheries

The strategy of using each member's dissatisfaction with the state of the industry as a common denominator was successful. Through individual meetings areas of individual gain were defined well enough to serve as a basis for another group discussion. The absence of well-trained management, marketing and shipping skills, which are the backbone of the Salinas-based produce industry became apparent and slowly prejudices against the concept and barriers began to break down. As the confidence in viewing the school as a possible solution increased, barriers decreased. The April group meeting was structured as an open discussion on industry problems and the function of the school became more and more defined as a satellite to the industry, rendering services and directly participating in industry problem solving. It resulted in a complete redesign of a portion of the original linkage model. Its purpose was to advance the linkage arrangement to welcome a higher organizational order, that of integration of component elements. The following pages represent the redesigned linkage model.

Solutions to Barriers:

Fisheries:	Culinary Arts:
Credibility of usefulness of efforts for personal gain	

Results:

- Renewed participation and transformation of original linkage model.
- Definition of coordinated effort to create the Department of Culinary Arts.

The "Insert" on the next few pages documents the proceedings of the "turn-around" meeting that was held with the Fisheries linkage design group.

INSERT

This insert describes the proceedings of a design meeting that was instrumental in moving the fisheries curriculum design group toward a creative solution.

Agreement on Goals within the Area of Interest

1

Educating the community to career opportunities available in the industry

2

Training manpower

3

Continuing education for present members of industry

4

Funding, capital development, equipment for industry

5

New product, resource, & market development

6

Governmental (political) regulations and community awareness

7

Economics & marketing

8

Management & production

Summarizing the informal portion of the April 26th meeting, these eight areas emerged as being generally relevant to all participants.

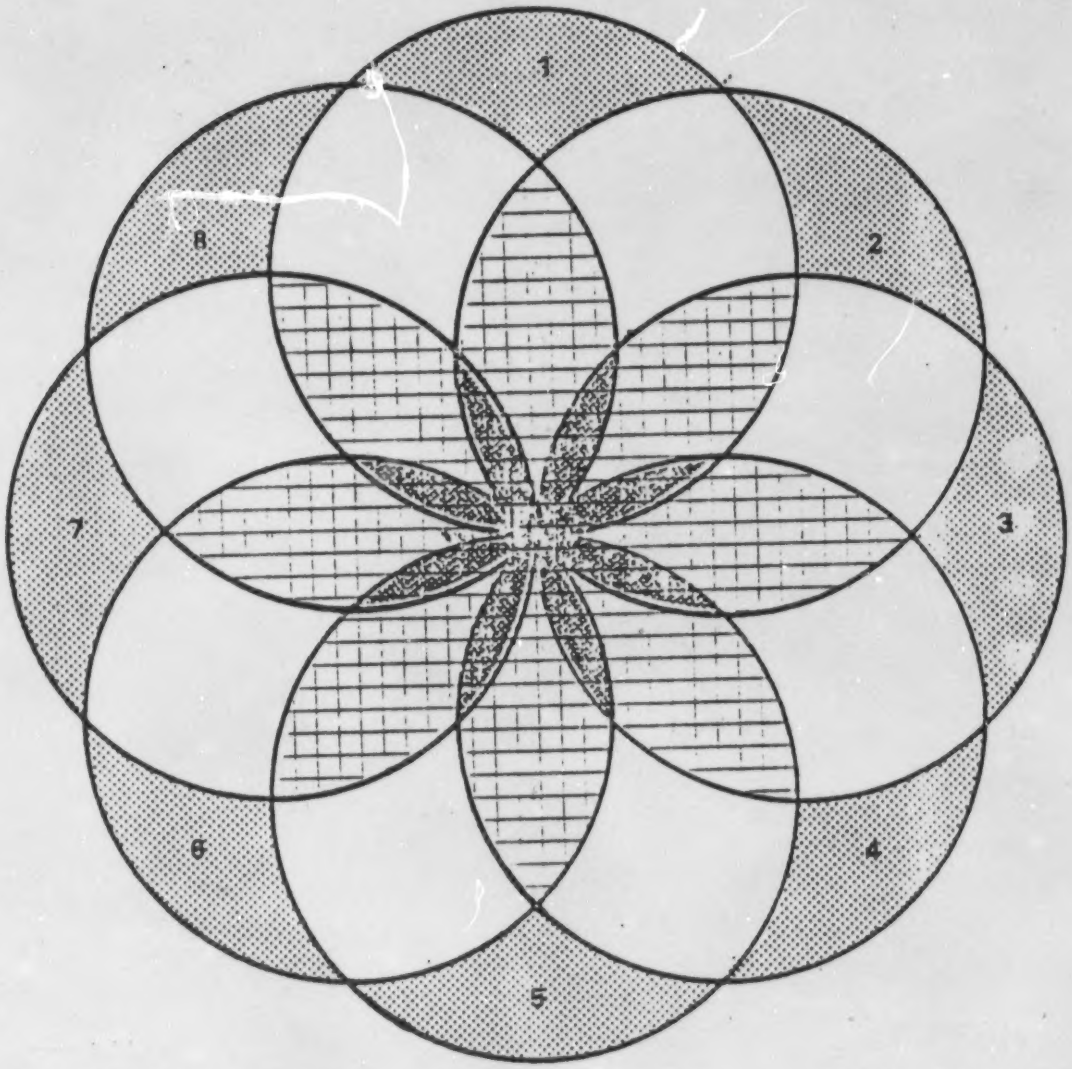
Note, that each can serve as a title for a course of instruction, as well as a vehicle for school-direct interaction with industry.

Dr. Banathy, in his role as "Linkage Facilitator," drew a pattern of overlapping circles, each denoting an area of interest and proposed this to be representative of a "Far West Consortium of Aquaculture Development and Production."

This concept signaled a new perimeter of school-industry interaction breaking most conventional boundaries.

Agreement on Goals within the Area of Interest (cont'd)

Picking up on Dr. Banathy's informal design, the circled units on the preceding page combine into the overlapping pattern below. It will be the purpose of the May 11th meeting to design in exact terms, what activities fall within each of the four categories. This will determine the relevance of the school to each participating industry. It may also lead to completely new configurations by which a school can relate to the community it serves.



Education Intensive:
Formal, structured courses and competence-based curricula; degree and diploma courses

Industry Informal:
Community outreach, communi: awareness programs, cor ulting, conferences, conventions, etc.

Education Informal:
Field trips, apprenticeships, industry surveys, reference library, etc.

Industry Intensive:
Creation or participatio n activities directly relevan: to industry; purchasing of : uipmen and providing services for industr use.

PLANNING FOR STEPS 7 TO 10

Step 7: Agreement and Commitment on the Means to be Used to Accomplish the Goals. This may be the longest and most difficult task to accomplish. It involves specifications of the general strategies and actions to be taken, resources needed, who will provide these resources, time sequence and schedule, the structural organization form under which coordination will be carried out, budgeting and evaluation procedures.

This step will take several months to accomplish. During this step, we should attend to three major tasks and several subtasks.

Task 7.1 - The design of pilot programs that would:

- formulate educational/training requirements
- conduct an experimental/pilot program that would be limited in scope but representative of the larger educational and training area
- identify the (1) means: instructional and learning resources and arrangements, and (2) methods by which to implement the pilot program
- specify (1) which participating organization will contribute what resources and (2) how the involvement of the organization will be coordinated
- formulate evaluation goals, means, and methods
- develop, plan, and schedule the pilot program

Task 7.2 - The testing of the pilot program that would evaluate:

- the feasibility of and necessity of this educational/training program
- the interests and capability of the participants to provide instructional/learning resources and arrangements by which to implement the pilot program
- the effectiveness of the program itself, and
- the effectiveness of interorganizational linkage and coordination

Task 7.3 - Based on findings of the pilot program, the development of the longer range program that would follow the pilot program.

Step 8: Formalization of the Negotiated Agreement. Organizational commitments should be recorded in a formalized, written agreement. This agreement will also aid the implementation process.

IMPLEMENTATION STATE

Step 9: Implementation. If the previous steps have been carefully negotiated, implementation can be fairly simple.

EVALUATION STATE

Step 10: Evaluation. Although this has been listed as the final step, evaluation must occur throughout the process. As a task step, evaluation entails obtaining information about project outcomes and success. Other dimensions should also be evaluated. These include:

- the processes used in securing coordination,
- the coordination structure.
- the adequacy of individual organization performance within the negotiated agreements.
- an assessment of the costs and benefits.
- the adequacy of the organization set (group of participating organizations) involved.
- the potential for additional coordinated activities.

LEGITIMATION & IMPLEMENTATION

Time Span: May 21 to June 30, 1978

Number of Meetings:			
	One-to-One	(Fisheries: 11)	(Culinary Arts: 9)
	Group	(Fisheries: 1)	(Culinary Arts: 2)

Goals: Education Focused

(1) Design of education-relevant school activities.
(2) Design of industry-relevant school activities.
(3) Task analysis and competence-based curriculum development.
(4) Educational systems development

Barriers: Both Departments

(1) Inability to abandon pre-conceived notions.
(2) Unwillingness to transcend pre-formulated expectancies.
(3) Lack of criteria for stress tolerance of original (school) design.

INVERSION POINT

Narrative:

Department of Fisheries

After the model for the integrated design was distributed among members of the industry the response was generally positive. Old barriers regarding loss of autonomy and maintenance of trade secrets still prevailed, but after two unsuccessful attempts a well-attended meeting took place. It was to be the longest in project history and broke every rule of good conference management, but a turning point was reached which brought about a new and enthusiastic re-commitment to the development of the school. The major barriers were clear. Participants were unable to think other than in their accustomed way about their business, their industry and what a school could be. They were unwilling to project future expectancies beyond known modes of achieving results The initiating institution had no concept of the stress tolerance of its original school design, meaning how much of an industry satellite can a school become and still remain a school. Ultimately, a strategy evolved, which served as a catalyst to integrate the initially disparate functions of component elements. The organizational questionnaire was introduced in a different context. It permitted each participant to clarify his own operations in their present state. From this position, an ideal future state was defined which was then brought back into the realm of credible reality. By analyzing the differences between this new state and the point of departure a series of requisites for an alternate state could be described. After defining barriers, resolving strategies could be classified by three categories: (1) individual actions, (2) peer (inter-organizational) actions, and (3) school actions. Suddenly, inter-organizational services became apparent, which heretofore were not possible, and the school which had actively participated in the process could become the catalyst for generating a higher organizational order by integrating component elements into a mutually beneficial structure.

The decision was made to activate the school in September, 1978, by teaching a pilot program in commercial fishing techniques, allowing a survey of the effectiveness of task analysis and program implementation. Meanwhile, a major effort is underway to develop a new system of school/industry integration.

Department of Culinary Arts

As the results of the above described efforts were explained to the restaurant industry, their value was recognized immediately. After a few brief meetings the following outline was developed and a simple guide for physical prerequisites defined. This led to a re-creation of the calendar and curricula creating a new concept of the school which, by becoming a satellite to the industry, provides new and realistic learning resources for its students.

The progressive planning outline on the last page displays three stages of evolution:
• cooperation (mutual assistance) • coordination (joint operations) • integration (systemic fusion)

These stages indicate a new perspective of inter-organizational linkage. The first stage implies the maintenance of autonomy of participating organizations, the second stage relinquishing of a certain degree of autonomy in order to gain certain benefits, and the third stage the creation of a system at a higher level of complexity with a new– shared state of autonomy.

PROGRESSIVE PLANNING OUTLINE FOR THE

INTERNATIONAL INSTITUTE OF FOOD INDUSTRIES
(DEPARTMENT OF CULINARY ARTS)

1. CO-OPERATION STAGE: members of the industry co-operate with the school by voicing industry needs and training standards. They also agree to work as faculty.

(Formal) EDUCATION RELEVANT

- Student Recruitment
- Formal Classes
- In-School Work Activities
- In-School Apprenticeship
- Continuing Education for Presently Employed Chefs
- Library Maintenance
- Reference and Sources Collection
- Instructional and Audio-Visual Equipment
- Trained Manpower
- New Training Methods

2. CO-ORDINATION STAGE: representatives from participating industries co-ordinate their efforts between each other and the school toward a continuing collaboration.

(Informal) EDUCATION RELEVANT

- Apprenticeships
- Field Trips to Restaurants (Restaurant Evaluation)
- TV Programs
- Counseling
- Personal Growth Seminar (Intra- & Inter-personal Skills)
- Externships
- Study Abroad
- Community Outreach

(Informal) INDUSTRY RELEVANT

- Consulting
- Library and Sources Collection
- Interpréters (Foreign Group Bookings)
- Menu Testing
- Continuing Education
- Task Analysis
- Subscription to World-Wide Trade Publications
- Publicity for Participating Restaurants
- Job Placement
- Credit Union
- Additional Income for Chefs
- Monitoring of School's Performance

3. INTEGRATION: participating industries define areas in which the school can directly interact with their activities, providing products and services which may constitute larger profits by increased business or operational savings.

INDUSTRY INTENSIVE

A. Services:

- Community-wide food cost/quality statistics.
- Community-wide food cost forecasting and product availability.
- Central restaurant information services.
  - (specify)
  - (specify)
- Computer services for cost analysis inventory and statistic evaluation.
- Hygiene and food chemistry laboratory services.
- Short-notice/short-term skilled labor pool.
- Collective purchasing.
- Group insurance.
- Future trend analysis
- Collective secretarial (typing) pool.
- Printing.
- Public relations.

B. Equipment:

- Special processing equipment.
- Special preparation equipment.
- Special preserving equipment.
- Special silver and china, etc. for catering.
- Clubroom for participating chefs and Restaurants.
- Other (specify)

C. Products:

- Collective wine purchasing and storing.
- Production of stocks, etc. in large quantities.
- Slaughter house operation and special meat cuts and products.
- Preparation of special menu items for banquets, catering.
- Preparation of special food items (boned fowl) for industry use.
- Farm-based products, such as home-made cheeses, etc.
- Farm-based animal products such as crayfish, snails (fresh), etc.
- Special products such as candied fruits, candies, desserts, etc.

LEGITIMATION & IMPLEMENTATION

Narrative:

Department of Culinary Arts

The end product of this process was the creation of a school which,by being part of the industry, must apply commercial industry standards to all in-school consumption, but for use by the industry, a serious realistic work atmosphere is prevalent throughout. Classrooms can still remain classrooms with all their advantages for conveying knowledge and skills, but students and teachers alike are graded daily by their viability to the real world. Also the scope and economy of operations are greatly improved since incomes are derived from sources other than tuition, supporting activities and equipment too costly to maintain for student use only.

School facilities for a September, 1978 opening have been chosen, faculty and staff are already selected, and school approvals are expected during the month of August. A catalogue will be published subsequent to this milestone and a sustained integrated operation will be formalized between members of the industry and the school.

Solutions to Barriers:

The seven steps of integrating disparate functions– (1) identifying each component element, (2) defining the present state of each component element, (3) designing an ideal future state for each component element, (4) analyzing function/organization prerequisites for differences, (5) resolving barriers to individuals by group coordination, (6) structuring a higher organizational order, and (7) integrating the component elements

4. A SUMMARY OF OUTCOMES

I. TRANSFORMATION OF SCHOOLS:

Inceptive Design: Courses were designed and scheduled to follow a standard college model. The calendar was based on an academic 11-week term, and school activities were confined to routine duties in support of educational programs. By involving relevant industries in the planning and development process via the linkage arrangement the following major innovations were affected

(a) **(Transformation)** The calendar was revised into a 12-week, 4-module (3 weeks each) design. This permits class duration to suit individual subject requirements. Courses can be scheduled as one to three-week intensives and a new class of students can be enrolled every three, instead of 12, weeks.

(b) Courses, subject contents, training and test criteria are developed as a product of task analysis, transferring industry requirements, standards and work attitudes to an in-school environment.

(c) **(Metamorphosis)** By developing services and products, which the school can supply directly to the industry, a department was created which coordinates and monitors these efforts. As this portion becomes an industry in itself, the school as all partner industries has undergone

a metamorphosis. Instead of the school being a learning institution and industry creating its products or services, two opposite industries now exist– one, with education being its primary objective and production secondary, and two, production (service) based and education secondary.

II. TRANSFORMATION OF INDUSTRIES:

Prelinkage Conditions: Labor was recruited by standard means, real qualifications of prospective employees could not be assessed until on-the-job observation was possible. The growth and profit potential of each business was confined to the skill of the manager solving barriers by primarily internal resources.

Transformation: By coordinating industry knowledge and efforts with the school, a skilled labor pool will be available and help can be hired to the exact level of job performance. Ongoing education for personnel and updating on latest equipment and techniques will keep the industry abreast with current developments, permitting new dimensions of growth.

Metamorphosis: By achieving an organizational order, which allows integration of all component elements, a new state of industry profit growth, ease of operation, and expansion became possible. Participating businesses and industries could draw from peer as well as school resources for problem solving or growth. They could clarify their own positions by actively participating in the education process; but most of all, they could vastly expand all operations by including education as an integral part of their organizational structure.

III. TRANSFORMATION OF LINKAGE MODEL

The Initial Model: was created for the purpose of facilitating the processes and involvement of private sector enterprises with an education project. Specifically, to aid in establishing a formal arrangement between a new Institute of Food Industries (Department of Fisheries and a Department of Culinary Arts) and local, relevant industries. The intent was to create these two departments by welcoming the industries to provide criteria for school design, curriculum planning, training and competence standards; also to allow the use of industry equipment and facilities to whatever extent feasible. The first linkage model was designed to foster a coordinated effort toward these goals.

Transformation: The first motivating goal to enter a linkage arrangement was the reward of aiding in the creation of a school. As barriers mounted during the early stages, it became apparent that this was not sufficient motivation to continue, and the linkage process would have to provide its own returns. The model had to be reexamined whether it contained enough provisions to stimulate a profit-minded industry. Since the linkage process can offer neither products nor direct services to participating businesses, its nature is confined to be catalytic, and the measure of its success is to be the vehicle which allows all participants to seek gain by advancing to a higher inter-organizational order. The first transformation of the model, therefore, included such modes as organizational questionnaires, formation of inter-organizational needs versus resources criteria and a germinating cell to bring about an integrated inter-organizational order.

Metamorphosis: Where it could have been possible to achieve milestones prior to the inversion point by a less formal arrangement than linkage, integrating a school with the industries it serves in the manner of this case study would not have been possible without the linkage model. After the perimeter of coordination was defined (Milestone Three) and efforts were focused on their inceptive goals, the complete re-creation of the original school design brought about the final change in the linkage model. By recording the growth pattern of the school, linkage evolution could be coordinated with school development, the inversion point was defined and a 20-point planning chart constructed.* The formalized agreement no longer terminated upon completion of planning or implementation stages, but became a sustained asset to the collective effort. Benefits to all participants of an integrated effort shared equally and formally between educational institution and private sector became so evident that the creation of a school or department, though still the best initial stimulus, is no longer the primary motivation.

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*See page 20.

CHAPTER IV

SUMMARY AND FINDING

INTRODUCTION

This last chapter summarizes a series of findings which evolved during or as a result of the linkage process. They include a study for extended private sector involvement, an impact diagram of linkage guided activities on the major participants, a flow chart of integrating the schools with industry, and a design for future use of the linkage process in the Monterey area.

1. REVIEW OF FINDINGS

Since only large industries can mobilize resources to think of actively entering labor training, medium to small companies need special motivation. This motivation is summarized in one simple sentence, "What's in it for me?" And indeed, for a symbiotic relationship to prevail over a long period of time, all participants must derive measurable benefits from it. In designing the original linkage proceedings, a long list of benefits to participants was developed, and is still growing. The important innovation was to organize benefits the school can make available to private industry by four major categories:

1. Education Relevant (Formal) - formal classes, lectures, etc.

2. Education Relevant (Informal) - apprenticeships, field trips, job opportunities, etc.

3. Industry Relevant (Informal) - consulting, community outreach, conferences, etc.

4. Industry Relevant (Formal) - creation or participation in activities, directly relevant to industry, also purchasing of equipment and providing services and products for industry use.

This way, the function of the school and the linkage arrangement becomes an extension of industry, assuring relevance of its existence to students and employers alike.*

Throughout the design of the linkage program three major considerations have been in focus:

- Maximum inter-organizational interaction and cross-fertilization, to allow maximum flexibility in satisfying organizational goals and attitudes.

- Reconciling the two opposites, lack of reality in the classroom and lack of proper instruction in the apprenticeship, hands-on mode of learning, emphasizing participation rather than observation as the central priority for in-school programs.

- Utilizing existing resources in the community to avoid duplication of efforts, equipment and facilities. The small budget available in the past and increasing financial pressures on the education community make maximum cost effectiveness a top priority.

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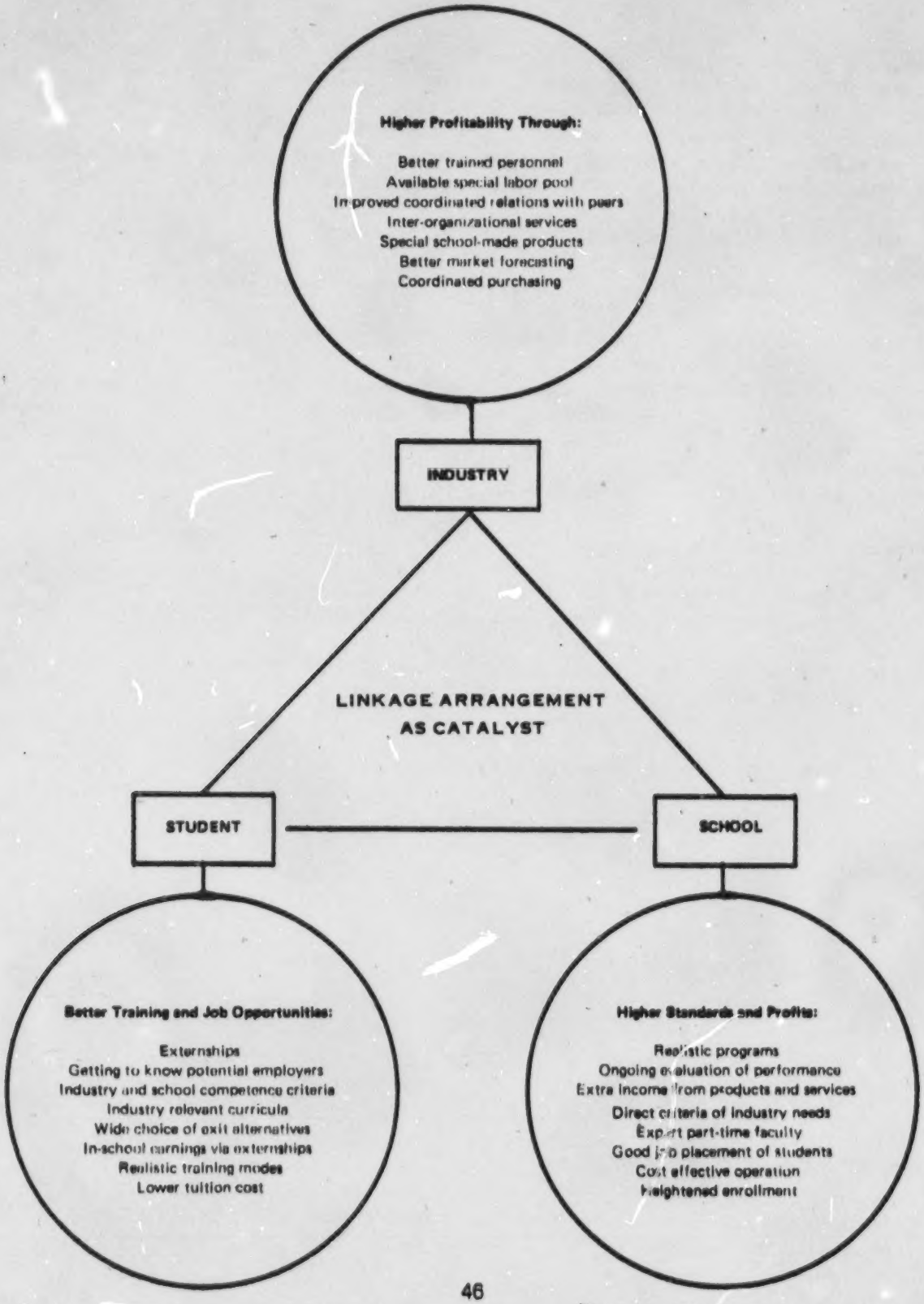
* In appendix F we outlined motivating factors, barriers which have been observed or are anticipated, as each further issue of design and implementation is addressed, and proposed solutions for the removal of barriers.

2 A PARTIAL LIST OF ADVANTAGES TO PARTICIPANTS IN THE LINKAGE PROCESS



3. THE DYNAMICS OF LINKAGE

Following each shank in the direction of the arrows demonstrates how the school approaches industrial operations and industries assimilate school behavior.

SCHOOL		SCHOOL (EDUCATIONAL) ACTIVITIES
Formal Classes		Lending Facilities as Classroom
Student Recruitment		Lending Equipment for Classroom
Lectures		Lending Staff for Faculty
In-School Apprenticeships		Participating in Curriculum Planning
Library		Participating in Task Analysis
Reference Collection		Sharing Future Planning
New Training Method		Sharing Policy Making
Externships		Receiving Apprentices
Field Trips		Accepting Field Trips
Educational TV Programs		Participating in Audio-Visual Program
Counseling		Assisting in Student Placement
Community Outreach		Using the School for Continuing Education
Continuing Education		Using the School for Community Outreach
Consulting		Consulting
Product Testing		Short-Notice/Short-Term Labor Pool
Task Analysis		Contracting Product Tests
Job Placement		Using Computer Services
Hiring of Faculty		Purchasing Statistical Data
Short-Notice Labor Pool		Entering Special Equipment Co-Op
Computer Services		Using Special Labor Services
Co-ordinated Purchasing		Purchasing Products from School
Raw Materials Cost Statistics		Accounting
Special Equipment Co-Op		Purchasing
Special Laboratory Service		Marketing
Preparing Special Products		Management
		Rendering Services
		Producing Goods
INDUSTRY ACTIVITIES		INDUSTRIES

4. DESIGN FOR FUTURE REPLICATION OF THE LINKAGE PROCESS BY INTERSYSTEMS SPONSORED PROJECTS

The information below introduces an image of the future in terms of programs that Intersystems plans to develop with the application of the linkage model described in their document.

INTERNATIONAL INSTITUTE OF FOOD INDUSTRIES

Department of Agriculture
Department of Food Processing Industries
(reported in this document)

CALIFORNIA INSTITUTE OF FINANCIAL MANAGEMENT

ACADEMY OF ARTS AND HUMANITIES

Department of Music (Division of Musical Industries)
Department of Fine Arts (Graphics and Commercial Printing)*

AMERICAN INSTITUTE OF FOREIGN MOTOR INDUSTRIES

CALIFORNIA SCHOOL OF ALTERNATE TECHNOLOGIES

THE CENTRAL COAST EDUCATIONAL CONSORTIUM

Division of Foreign Student Recruitment

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* This effort has been already initiated. Members of the local printing industry became cognizant of the linkage project taking place and they requested linkage materials and contacted the school with the request to replicate the process to suit their industries.

5. CONCLUSION

In this monograph we projected the private post secondary vocational education linkage effort of a project which aimed to design models for the linkage of vocational education at post-secondary institutions and business, industry and labor.

The information presented in this document

(1) validated the notion of a disciplined model based approach to linking the school with other societal sectors and at the same time

(2) it displayed new insights and understandings that seem to make significant contributions to linkage and inter-organizational coordination.

It is hoped that additional opportunities will be opened for continuing research and design work in this domain of social evolution and design.

APPENDICES

A. Guidelines for Program Design ("Start-Up" Materials)

B. Curriculum for Dept. of Culinary Arts (First Draft)

C. Facilities Planning Guide

D. Curriculum for Dept. of Culinary Arts (Second Draft)

E. Curriculum for Dept. of Culinary Arts (Final Draft)

F. Issues that Have Emerged and are Expected to Emerge

APPENDIX A

GUIDELINES FOR PROGRAM DESIGN:

LEGEND: (C) Class Instruction (I) Independent Study (P) Practical Experience under Supervision (Units are estimated)

	Course Title	Type	Units	Week Hrs
I	Breadth Requirement (Degree Students Only)	C	30	
II	Practical Trade Qualifications:			
	1. Certificate and full ratings for aquariums	P		30
	2. Certificate and full ratings for hard hat	P		60
	3. Certificate and captain's papers for small craft	P		60
	4. Single engine pilot's license and instrument rating	P		50
	5. Underwater skills: photography, welding, etc.	P		48
	6. Fishing techniques	C	10	
	Fishing techniques	P		100
	7. Elective Practical Project	I	4	
	*Elective Practical Project	P		88
III	Marine Biology (Special Design for the Industry)	C	24	
IV	Oceanography (Special Design for the Industry)	C	6	
V	Meteorology (Supplemental to Pilot Training)	C	10	
VI	National and International Maritime and Fishing Law	C	6	
VII	Environmental Concepts and Professional Ethics	C	6	
VIII	Fish Processing, Shipping and Marketing	C	9	
		P		220
IX	Equipment Maintenance and Repair	C	6	
		P		200
		I	2	
X	General Business Administration Curriculum	C	40	
		P		100
		I	8	
XI	Special Industry Requirements	C	30	
		I	3	
XII	Electives: fish farming, ocean or fresh water, etc.	C+I	10	
	Total Units for B.A.		**204**	**2510**

APPENDIX B

CURRICULUM FOR L'ECOLE DE CUISINE

I. RATINGS:

A. Diplome de Cuisine (2 years)
B. Chef de Cuisine (4 years)
C. Maitre de Cuisine (6 years)
D. B.B.A. or M.B.A.

II. CURRICULA (FIRST TWO YEARS):

A. To Be Taken In Order:

	Units:	Hours:
1. First Term:		
a. The restaurant kitchen (technology)		1
b. Chemistry of cooking		3
c. (1) Senses of taste & smell		1
(2) Senses of taste & smell (laboratory)		1
d. The short order cook		2
e. Basic food preparation		10
2. Second Term:		
a. The senses of taste & smell		1
b. The senses of taste & smell (Laboratory)		1
c. Basic food preparation		5
3. Third Term		
a. The skills of systematic habit forming		1
b. The senses of eating		1
c. Basic French cooking		5
d. Basic Chinese cooking		5
4. Fourth Term (second year):		
a. French cooking		5
b. Chinese cooking		5
5. and 6. Fifth and Sixth Term:		
a. French cooking		5
b. Chinese cooking		5

B. The following subjects are offered rotating on a two-year cycle and are required to be taken in their entirety:

1. International Weights and Measures		1
2. Introduction to Spices		1
3. The Butcher's Anatomy (International)		2
4. International Culinary Terms		1
5. Kitchen Hygiene		1
6. Restaurant Criticism	6	
7. The Hotel Kitchen		1
8. The Butcher's Skills		5
9. The Skills of the Waiter		13
10. Basic American Restaurant Cooking		10
11. Bar Tending		1
12. Hotel Kitchen Management		2
13. Realizing a Recipe		5
14. Coffee, Tea, Cocoa and Ice Cream Preparations		1
15. Cooking for the American Luxury Hotel		5

16. The Bread Baker		3
17. Restaurant Food Management	2	
18. Fundamentals of Management	3	
19. Accounting (Financial)	3	
20. The Fine Baker		1
21. The Wine Steward and Serving Techniques		2
22. Viticulture		5
23. Introduction to Business Law	3	
24. Marketing	3	
25. Managerial Accounting	3	
26. Restaurant Supplies and Purchasing Techniques	2	
27. Communications	6	
28. The Pastry Chef		9
29. Waste Management		1
30. Traditions of Tablesetting (International)		2
31. Italian Specialties		4
32. Japanese Specialties		4
33. World Specialities		8

TOTAL HOURS: 180

TOTAL HOURS DIVIDED BY SIX (6) TERMS = 30 WEEK HOURS PER TERM

UPPER DIVISION (3RD & 4TH YEAR)

Core Courses:

1. French	18
2. History of Civilization: Western (2) and Eastern (2)	24
3. Small Farm Agriculture	18
4. Restaurant Criticism	6

Major Requirements:

1. French Haute Cuisine	30
2. History of Food Preparations	1
3. History of Farming & Raw Material Preparations	1
4. The "Master" Waiter	2
5. World Specialties: 5 hours each of Europe, Asia, Middle East and Polynesia	20
6. Menu Composition	1
7. Analysis of the "Small" Family Operated Restaurants	3
8. Analysis of the Three Star Restaurants	3

Electives: all students are required to choose one subspecialty of 20 units from the following subjects

1. Hotel Motel Management	20
2. Air Line Food Management	20
3. Luxury Liner Food Management	20
4. Country Club Management	20
5. Military Food Management	20
6. Hospital Food Management	20

TOTAL UNITS AND HOURS: 146

DIVIDED BY SIX (6) TERMS = 24 WEEK HOURS PER TERM

GRADUATION REQUIREMENTS:

I. Diplome de Cuisine:

1. Satisfactory completion of all course requirements for the first two years.
2. Preparation of a six-course French dinner (under time limit).
3. Preparation of a six-course Chinese dinner (under time limit).
4. Demonstration of high proficiency in a chosen specialty of food preparation such as:

   bread baking
   pastry
   dessert
   ice cream
   or an ethnic food area

II. Chef de Cuisine:

1. Beverage in all academic subjects.
2. Completion of all requirements for the major.
3. Preparation of a complete meal (not fewer than five courses) from an authentic cookbook of a world area and printed in a language the student is unfamiliar with.
4. Preparation of an eight-course meal in French tradition (under time limit, including shopping for raw materials).
5. Preparation of an eight-course meal in Chinese tradition (under time limit, including shopping for raw materieals).
6. Preparation of an eight-course meal in student's chosen cultural area (under time limit, including shopping for raw materials).
7. Demonstration of all restaurant-related practical skills; reservation and personnel management, food purchasing, cost accounting and waiting on tables.
8. Demonstration of basic knowledge of wines and spirits and rudimentary district recognition by tasting.
9. Demonstration of basic knowledge and skills in processing food from the farm to the table.
10. Knowledge of supply and information sources.
11. Completion of all sub-specialty requirements.
12. Demonstration of the ability to successfully manage a small farm.
13. Preparation of at least three original recipes.

III. The B.S. in Business Administration from the Academy of Arts and Humanities:

1.	Units accepted from lower division		33
2.	Units accepted from upper division:	core courses	66
		electives	20
3.	Units allowed for area of specialization		16
4.	Units required for B.S.		180

5. 15 units per term for three (3) terms to complete all major requirements from business curriculum, plus electives (15 units) and general education

V. The Maitre de Cuisine: three areas of advanced study are envisioned

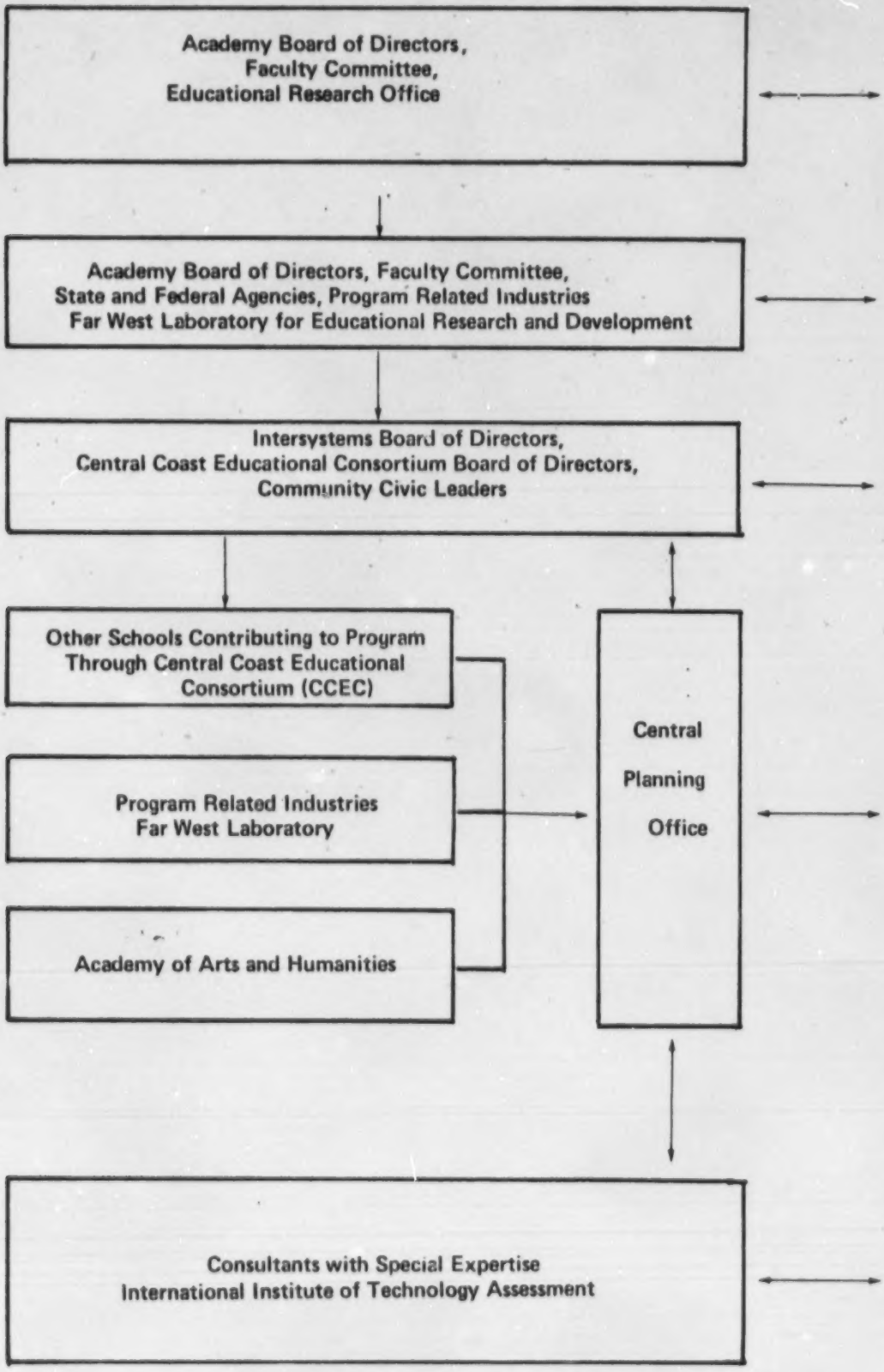
1. The complete mastery of cooking skills in two major cultural ethnic areas. Studies lead to meet standards of the American Culinary Institute, but course work additionally must include the following items:
   a. a theoretic and practical knowledge of the volutionary history of both chosen study areas, including the ability to function with historic kitchen equipment and the absence of certain recent raw materials, such as sugar, etc.
   b. the ability to prepare foods for use as ingredients or raw material preparations such as smoking, pickling, etc. with and without the use of modern technology.
   c. the knolwedge to grow or raise major ingredients, spices, or unusual prerequisites.
   d. the mastery of the language of at least one of the two areas of study.
   e. demonstration of ability to design, finance, manage and promote a restaurant.

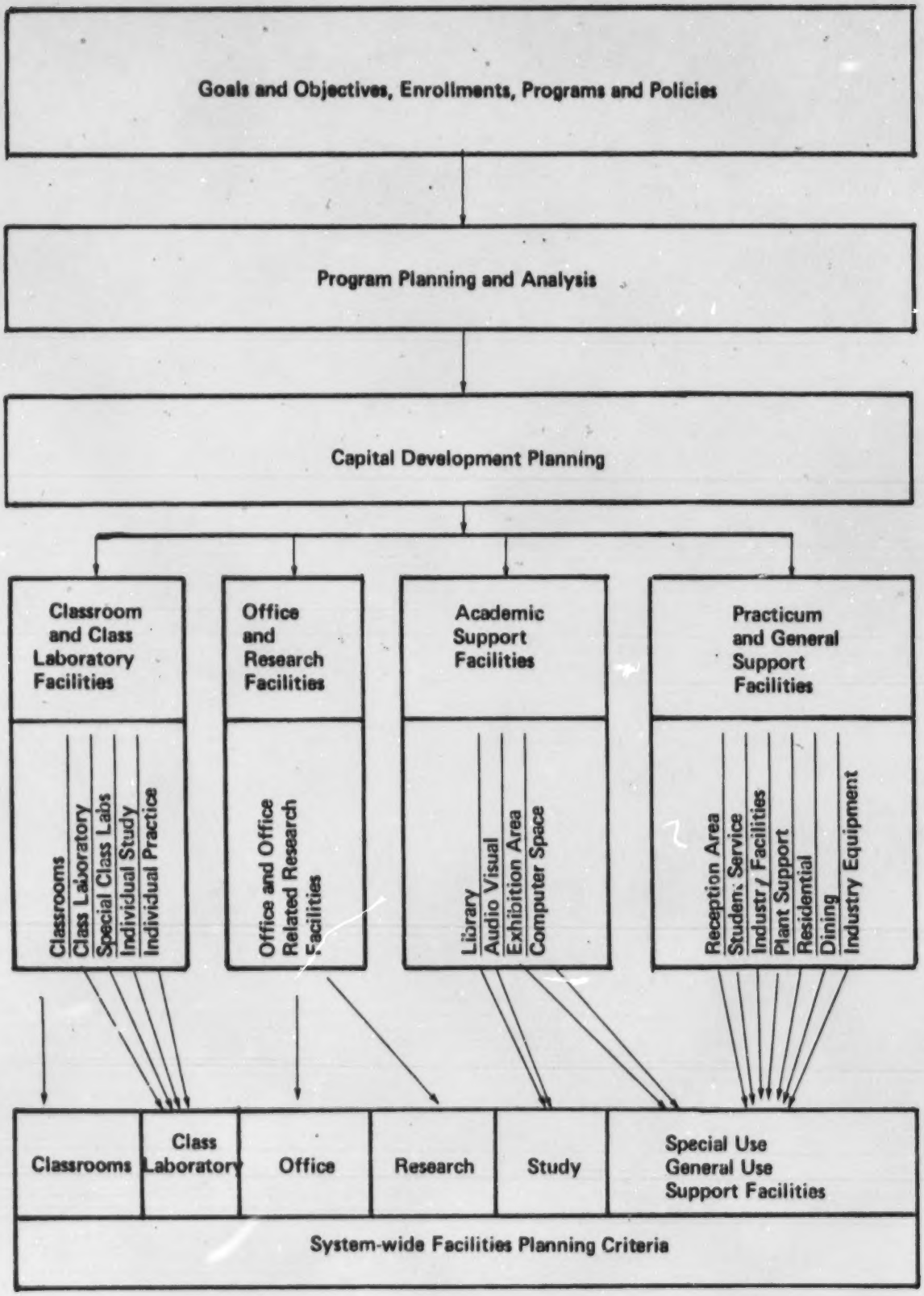
2. The exhaustive study of the cuisine of one specific country, including residency in a restaurant school or equivalent apprenticeship in a restaurant. Studies are designed to lead to A.C.I. standards plus the standards set by the chosen nation for its highest honor in cuisine. Studies can be divided between the Academy and approved foreign training environs. For obvious reasons, mastery of the language of the country is required. Specific standards beyond those of the A.C.I. are designed by mutual consent between student and mentor.

3. A specific area of food management such as hotel, air line, ocean liner, etc. Courses are designed to suit student requirements and standards of the A.C.I.

Of the 48 units required for an M.A. in Business Administration 24 units can be allowed for the student's specialization in the culinary arts. The remaining 24 must be chosen from the curriculum of the department of business.

APPENDIX C


Academy Board of Directors,
Faculty Committee,
Educational Research Office
Academy Board of Directors, Faculty Committee,
State and Federal Agencies, Program Related Industries
Far West Laboratory for Educational Research and Development
Intersystems Board of Directors,
Central Coast Educational Consortium Board of Directors,
Community Civic Leaders
Other Schools Contributing to Program
Through Central Coast Educational
Consortium (CCEC)
Program Related Industries
Far West Laboratory
Academy of Arts and Humanities
Central
Planning
Office
Consultants with Special Expertise
International Institute of Technology Assessment


Goals and Objectives, Enrollments, Programs and Policies
Program Planning and Analysis
Capital Development Planning
Classroom and Class Laboratory Facilities
Office and Research Facilities
Academic Support Facilities
Practicum and General Support Facilities
Classrooms
Class Laboratory
Special Class Labs
Individual Study
Individual Practice
Office and Office Related Research Facilities
Library
Audio Visual
Exhibition Area
Computer Space
Reception Area
Student Service
Industry Facilities
Plant Support
Residential
Dining
Industry Equipment
Classrooms
Class Laboratory
Office
Research
Study
Special Use
General Use
Support Facilities
System-wide Facilities Planning Criteria

APPENDIX D

SECOND YEAR

TERM ONE:

MODULES II and IV are one-week subjects
MODULES I and III are one module or three-week subjects

TERM TWO:

Same as Term One

TERM THREE:

Externship

*****

Two types of subject-time organizations are used for the second year:

A. *Three-week 24-hour per week (72 hours total)*
B. *One-week 24 hours*

Each week 8 hours are retained

Four hours for a weekly total proficiency evaluation

Four hours for academic subject instruction

*****

ONE MODULE THREE-WEEK (72 HOURS) SUBJECTS:

1. *Classical Cuisine and Banquet Organization*
2. *Advanced Garde Manger*
3. *Principles of Charcuterie*
4. *Advanced Baking and Classical Pastry*

ONE WEEK SUBJECTS (24 HOURS) THREE PER MODULE:

1. *Menu and Facilities Planning*
2. *International Food Preparations*)
3. *International Food Preparations*) *Separate Sections*
4. *International Food Preparations*)
5. *Advanced Table Service*
6. *Wines and Basics of Viticulture*
7. *Wine Stewarding and Beverage Table Service*
8. *Bartending (including costing, portion control, etc.)*
9. *Buffets for Profit*
10. *Institutional Food Service and Catering Systems*
11. *Restaurant Kitchen Management (a comparative study)*
12. *Food Purchasing and Quality Evaluation*

FOUR HOURS PER MODULE (TOTAL OF 12 HOURS) FOR ACADEMIC SUBJECTS:

1	*Introduction to Management*	*1 unit*
2.	*Manpower Management & Interpersonal Skills*	*1 unit*
3.	*Manpower Management & Interpersonal Skills (cont'd)*	*1 unit*
4.	*Communications and Business English*	*1 unit*
5.	*Mathematics and Introduction to Artificial Intelligence*	*1 unit*
6.	*Introduction to Marketing*	*1 unit*
7.	*Principles of Small Business Administration & Public Relations*	*1 unit*
8.	*Principles of Business Finance*	*1 unit*
	Subtotal	*8 units*

FINAL PROFICIENCY EXAMINATION FOR TWO-YEAR DIPLOME DE CUISINE

TERM TWO:

MODULE I.

A.	*Hot Food Preparation (continued)*	*(3x) 8 hrs.*	*(2-2-2-2)* *(4-4)* *(4-4)*
B.	*Chinese Food Preparation*	*(3x) 8 hrs.*	*(2-2-2-2)*
C.	*Frozen Food Preparation*	*(3x) 4 hrs.*	*(2-2)*
D.	*Intermediate Pastry Baking*	*(3x) 4 hrs.*	*(4)*
E.	*Business and Industry Food Service Systems (Accounting Practicum)*	*(3x) 8 hrs.*	*(2-2-2-2)*
	Subtotal	*96 hrs.*	

MODULE II.

A.	*Hot Food Preparation*	*(3x) 8 hrs.*	*(2-2-2-2)*
B.	*Chinese Food Preparation*	*(3x) 8 hrs.*	*(2-2-2-2)*
C.	*Kitchen and Food Hygiene*	*(3x) 4 hrs.*	*(1-1-1-1)*
D.	*Milk Products and Cheeses (Introduction)*	*(3x) 8 hrs.*	*(2-2-2-2)*
E.	*Recipe Costing and Product Analysis (Cost Accounting)*	*(3x) 4 hrs.*	*(2-2)*
	Subtotal	*96 hrs.*	

MODULE III.

A.	*Preparation for First Externship*	*(3x) 4 hrs.*	*(2-2)*
B.	*A La Carte Food Preparation (Introduction of European "Brigade" system)*	*(3x) 8 hrs.*	*(4-4)*
C.	*Chinese Cooking*	*(3x) 4 hrs.*	*(2-2)*
D.	*Introduction to Business Law and Insurance*	*(3x) 4 hrs.*	*(2-2)*
E.	*Managerial Accounting*	*(3x) 4 hrs.* *(3x) 8 hrs.*	*(2-2)*
	Subtotal	*96 hrs.*	

MODULE IV.

A.	*Preparation for Externship*	*(3x) 4 hrs.*	*(2-2)*
B.	*A La Carte Food Preparation (continued)*	*(3x) 8 hrs.*	*(4-4)*
C.	*Introduction to Japanese Cooking*	*(3x) 8 hrs.*	*(2-2-2-2)*
D.	*International Culinary Terms*	*(3x) 4 hrs.*	*(2-2)*
E.	*World Specialties and Introduction to "Cuisine Bourgeoise"*	*(3x) 8 hrs.*	*(4-4)*
	Subtotal	*96 hrs.*	

TERM THREE: EXTERNSHIP

A.	*Externship Supervision*	*(3x) 4 hrs.*	*(2-2)*
B.	*Externship Summary (1 week)*	*(3x) 8 hrs.*	*(6-6-6-6)*

2nd Two Years Exit Goal "CHEF DE CUISINE" with a 5th possible year of academic preparation for a B. S. in Restaurant Business Administration:

Required Academic Units:

1.	*Business English*	6
2.	*Business Mathematics*	6
3.	*Introduction to Small Farm Agriculture*	6
4.	*Advanced Accounting*	6
5.	*Tax and Labor Law*	3
6.	*Introduction to Small Animal Husbandry*	3
7.	*French*	24
	(27 units per year; 9 units per term)	54 *(for two years)*

Vocational Requirements: 1 week = 24 class hours = 1 unit

Subject title and number of 24-hour weeks.
Total number of weeks: 48 weeks or 4 terms or 16 modules
8 modules 3-week (72 hours) subjects
24 one-week (24 hours) subjects.

1 Module (3-week subjects):

No. 1 French Haute Cuisine
No. 2 French Haute Cuisine
No. 3 Chinese Haute Cuisine
No. 4 Chinese District Haute Cuisine (Regional Specialties)
No. 5 Viticulture
No. 6 The European Butcher
No. 7 Farm Food Production Methods
No. 8 Chain Hotel Kitchen and Food Management

Basic Areas of Specialization:

1. *Restaurant Management*
2. *Raw (Farm) Food Production (cheese, butchering, etc.)*
3. *Haute Cuisine Chef (Kitchen Management)*
4. *Institutional Food Service and Catering (hospital, military, air, sea, etc.)*
5. *Food Marketing*
6. *Hotel-Motel Management*
7. *Small Farm Management*
8. *Food Sanitation Technology*
9. *Food Technology*
10. *Food Chemistry and Nutrition*
11. *Kitchen and Plant Safety*
12. *New Food Products Research and Development*
13. *Candy Making and Associated Skills*
14. *Farm Food Production Technology and Systems*
15. *Pre-20th Century Food Production and Culinary Concepts*
16. *European Externships*

ONE WEEK (24 HOURS) SUBJECTS:

1.)
2.)
3.)
4.)
5.)
6.) Special one-week seminars with great chefs
7.)
8.)
9.)
10.)
11. *Restaurant Criticism*
12. *Food Purchasing*
13. *Sources (World-Wide)*
14. *Advanced Seminar in American Wines*
15. *Advanced Seminar in European Wines*
16. *Candy Making*
17. *Fish Farming (Fresh Water)**
18. *International Table Setting and Introduction to Porcelain and Glass**
19. *History of Food Preparation I*
20. *History of Food Preparation II*
21. *Advanced World Specialties**
22. *Advanced Seminar in Restaurant Design, Financing & Marketing*
23. *Advanced Seminar in Beer Brewing and Wine Making (& Externship)*
24. *Advanced Seminar in Food Sanitation Technology.*

**can be substituted by an elective subject*

FIFTH (ACADEMIC) YEAR

Units Accepted from first 2 years:	*academic*	*30 qtr. units*
	vocational	*20 qtr. units*
Units Accepted from second 2 years:	*academic*	*54 qtr. units*
	vocational	*31 qtr. units*
Units gained in fifth year:	*academic*	*45 qtr. units*
UNITS REQUIRED FOR B.S. BUSINESS ADMINISTRATION (RESTAURANT MANAGEMENT)		*180 qtr. units*

APPENDIX E

MODULE I

BASIC SKILLS:		HRS.	UNITS
A.	Introduction to Butcher Skills Week 1 Week 2 Week 3	3x8	2-2-2-2
B	Introduction to Baking	3x4	4
C.	Basic Culinary Techniques	3x8	4-4
D	Introduction to Culinary Principles and Foods	3x4	2-2
E.	Sanitation and Hygiene	3x4	2-2
F	Introduction to Food Bacteriology	3x4	2-2

A.			
B.			
C.			
D.			
E.			
F			

MODULE II

EXTERNSHIP: RESTAURANT KITCHEN

A.	Introduction to Baking (continued) - including Pastry	3x8	4-4
B.	Pantry and Breakfast Cookery	3x4	2-2
C.	Coffeeshop and Short-Order Procedures	3x4	2-2
D.	Basic Culinary Techniques (continued)	3x4	2-2
E.	Cafeteria and Counter Service	3x4	2-2
F.	Introduction to Hot Food Preparation	3x4	4
G.	Food Bacteriology (continued)	3x4	2-2

A.			
B.			
C.			
D.			
E.			
F.			
G.			

COMMENTS

MODULE III

		HRS.	UNITS
A.	Hot Food Preparation (continued)	3x8	2-2-2-2
B.	Intermediate Baking	3x4	4
C.	Advanced Coffeeshop and Short Order Procedures	3x4	2-2
D.	Introduction to Garde Manger	3x8	4-4
E.	Food and Beverage Service	3x4	2-2
F.	The Senses of Taste, Smell, Touch	3x4	1-1-1-1

A.			
B.			
C.			
D.			
E.			
F.			

MODULE IV

A.	Hot Food Preparation (continued)	3x8	4-4
B.	Introduction to Chinese Food Preparation	3x8	4-4
C.	Industrial, Hospital, Club, Institutional, School Food Service	3x4	2-2
D.	Introduction to Alcoholic Beverages and Industry Regulations	3x4	2-2
E.	Intermediate Table Service	3x4	2-2
F.	Survey of Milk Products and Cheeses	3x4	2-2

A.			
B.			
C.			
D.			
E.			
F.			

COMMENTS

MODULE V

EXTERNSHIP: FOOD CATERING AND RETAIL		HRS.	UNITS
A	Hot Food Preparation	3x8	2-2-2-2
B.	Chinese Food Preparation	3x8	2-2-2-2
C	Intermediate Pastry Baking	3x4	4
D.	American Plan Food Service in Hotels	3x4	2-2
E	Introduction to Catering	3x4	2-2
F.	Specialty Food and Wine Retailing	3x4	2-2

A.			
B			
C.			
D.			
E			
F.			

MODULE VI

A.	Hot Food Preparation	3x8	2-2-2-2
B.	Chinese Food Preparation	3x8	2-2-2-2
C	Intermediate Pastry Baking	2x4	4
D.	Intermediate Bread Baking	2x4	4
E	Introduction to Japanese Cooking	3x8	4-4

A			
B.			
C.			
D			
E.			

MODULE VII

A.	A la Carte Food Preparation (Introduction of European "Brigade" System)	3x8	4-4
B.	Chinese Cooking (continued)	3x4	4
C.	Japanese Cooking (continued)	3x4	4
D.	Catering and Catered Banquet Management	3x8	4-4
E.	Advanced Table Service	3x4	4
F.	Oriental Table Service	3x4	4

A			
B.			
C			
D			
E			
F			

COMMENTS:

76

MODULE VIII

		HRS.	UNITS
A.	A la Carte Food Preparation (continued)	3x8	4-4
B.	Chinese Cooking (continued)	3x4	4
C.	Italian Cuisine	3x8	4-4
D.	The Sous Chef	3x4	2-2
E.	Banquets	3x8	4-4

A.			
B.			
C.			
D.			
E.			

MODULE IX

EXTERNSHIP IN TABLE SERVICE:

A.	Introduction to French Cuisine	3x8	4-4
B.	Italian Cuisine	3x8	4-4
C.	Introduction to Accounting	3x4	1-1-1-1
D.	Principles of Menu Making and Merchandising	3x8	2-2-2-2
E.	Wine Cellar Operation	3x4	1-1-1-1

A.			
B.			
C.			
D.			
E.			

MODULE X

A.	French Cuisine	3x8	4-4
B.	Advanced Garde Manger	3x4	2-2
C.	Beverage Purchasing Guides	3x4	1-1-1-1
D.	Cost Accounting	3x4	1-1-1-1
E.	Food Purchasing Guides (Food Management)	3x8	2-2-2-2
F.	Introduction to Management	3x4	1-1-1-1

A.			
B.			
C.			
D.			
E.			
F.			

COMMENTS

MODULE XI

		HRS.	UNITS
A.	French Cuisine	3x8	4-4
B	"Cuisine Minceur"	3x4	2-2
C.	"Cuisine Bourgeoise"	3x4	2-2
D	Food Management, Food Receiving and Storing Procedures	3x8	2-2-2-2
E.	Management Budgeting for a Food and Beverage Operation	3x4	1-1-1-1
F	Managerial and Special Accounting	3x4	1-1-1-1

A			
B.			
C			
D.			
E			
F.			

MODULE XII

A	Years Summary in Food Preparation	3x16	4-4-4-4
B.	Special Aspects of Food and Menu Control	3x4	1-1-1-1
C	Issuing Food	3x4	1-1-1-1
D.	Accounting for Statistics and Analysis	3x4	1-1-1-1
I	Introduction to Business Law and Insurance	3x4	1-1-1-1

COMMENTS:

SECOND YEAR

Three types of subject time organizations are used:

A. Three-week, 24 hours per week (72 hours total) - 1 module

B. One week, 24 hours, 3 subjects per 1 module

C. Academic subjects, 1 or 2 hours a week for 12 weeks, 1 or 2 units

A.
B.
C.

One module, three-week (72 hours) subjects:

1. Classical Cuisine and Banquet Organization
2. Advanced Garde Manger and Buffet Catering
3. Advanced Baking and Classical Pastry
4. Principles of Charcuterie
5. The European Butcher

1.	7.
2.	8.
3.	9.
4.	10.
5.	11.
6.	12.

One week subjects (24 hours) three subjects per module:

1. Facilities Planning
2. Displaying Foods for Retail, Buffets and Catering
3. Food Technology
4. Advanced Table Service
5. Wines and Basics of Viticulture (including taste recognition)
6. Wine Stewarding and Beverage Table Service
7. Bartending (including costing, portion control, etc.)
8. Institutional Food Service and Catering Systems
9. Comparison Study of Restaurant Kitchens
10. International Food Preparations (Special studies with selected instructors)
11.
12.
13. Advanced Classical Cuisine
14.
15.
16. Dining Room and Reservation Management
17. International Dining Protocol and Etiquette

1.	13.
2.	14.
3.	15.
4.	16.
5.	17.
6.	18.
7.	19.
8.	20.
9.	21.
10.	22.
11.	23.
12.	24.

SECOND YEAR

Academic subjects, 1 hour per week for 12 weeks (1 unit)

		UNIT
A.	Restaurant Management	1
	Employee Training	1
	Advertising and Promotion	1
	Pre-cost, Pre control Procedures	2
	Wine and Liquor Control and Bar Pricing	1
	Payroll Analysis and Control	1
B.	Communications and Business English	1
	Business Mathematics and Introduction to Micro-Computers	2
	Principles of Marketing	1
	Principles of Business Finance	1
	Real Estate and Lease Laws	1
		12 Units

A.	B.

Weekly hour arrangement:

24 hours	Vocational Subject
4 hours	Academic Subjects
2 hours	Personal Growth Seminar
2 hours	Weekly Proficiency Evaluation

A total of 1200 externship (Practicum) hours are required for graduation with a two-year diploma

SECOND TWO YEARS

Week-Hour Organization:

12 hours	Vocational Subjects	½ Vocational unit
10 hours	Academic Subjects	10 Academic units
2 hours	Personal Growth Seminar	0 units
1 hour	Externship Supervision	0 units
25 hours	TOTAL IN-SCHOOL HOURS	

Required Academic Units:

		UNIT
1.	Business English	6
2.	Intermediate Business Math	6
3.	Small Farm Agriculture	6
4.	Tax and Labor Laws	2
5.	Small Animal Husbandry	2
6.	French (or German or Italian)	24
7.	Chain Hotel Food Management	6
8.	Statistics	3
9.	Statistical Analysis and Forecasting	2
10.	Advanced Managerial Techniques	3
	TOTAL	60

A total of 1200 practicum hours are required for graduation– 400 (restaurant kitchens), 400 (restaurant management) and 400 (student's choice)

APPENDIX F

ISSUES THAT HAVE EMERGED AND ARE EXPECTED TO EMERGE

How arrangements can be made to have private sector employers expand efforts to provide jobs to in school youth.

Motivation: Low cost labor; part-time help as needed.

Barriers: Low skills, reliability and professional attitudes, uncertain availability and accessibility.

Proposals: Intensive skill preparation, job simulating study environ; interpersonal skill training.

Pre-planned need analysis and projection; community outreach; employer monitoring of school performance.

How private sector employers can participate with schools in improving efforts for youth career exploration and planning and skill development.

Motivation: Long range projection for exact extent of training, preparation anticipating new trends in work and technologies, and skill pool of workers trained to exact job requirements.

Barriers:

a. Lack of employer's analysis of own future needs.

b. Distrust to view "in-school" education as solution.

c. Adherence to parochial means of labor recruitment.

d. Cost/time ineffective projects.

Proposals:

a. Competence-based curricula, via on-the-job task analysis and CRT (Criterion Referenced Test).

b. Programs to be— industry-learner directed, industry-learner focused, and industry-learner active.

c. Paying faculty or consulting wages to employers for time spent in designing self-service future job criteria.

How private sector employers and schools can work together to effect classroom and job time schedules and other actions to facilitate private sector employment and/or training for youth.

Motivation: Availability of labor at time and for duration required.

Barriers: Arbitrary scheduling of class times.

Proposals: Scheduling formal activities of in-school program to group convenience, group meaning students, employers, faculty.

How private sector work supervisors can be better prepared to supervise youth.

Motivation: Increased cost effectiveness of labor.

Barriers:

a. Supervisorial time spent.

b. Lack of exact competence criteria for evaluation.

c. Lack of instructional skills.

Proposals:

a. Training supervisors in teaching methods to serve as formal faculty and informal supervisors.

Proposals:

b. Paying them one hour per day of their customary wages to prepare and summarize student's work day.

c. Task analysis to provide exact performance criteria for job competence, resembling a course syllabus.

How job-sharing arrangements can be devised between students and other part-time workers.

Motivation: To employer-- assisting the industry by helping build a skill pool.

To part-time workers– flexible scheduling for work time to suit personal convenience (free evenings, weekends, etc.).

Barriers: To employer– danger of inefficient scheduling of connecting times.

To part-time workers– threat of job security.

Proposals:

a. School provides guidance for job scheduling.

b. Contractual arrangements for job security.

c. Rotating of students between employers to reduce feeling of permancy.

How expanded youth employment opportunities can be brought about through reduction in barriers to youth employment created by institutional policies and practices (insurance and bonding of youth, teacher, certification, supervision of youth, administrative procedures and paper work, etc.).

Motivation: Low cost labor; part-time help as needed.

Barriers:

a. Insurance and bonding.

b. Certification and supervision.

c. Procedural.

d. Union resistance.

Proposals:

a. Insurance and bonding on group basis by school.

b. Competence-based curricula and job performance criteria and supervision guidelines.

c. Supervisor training by school with financial time compensation.

d. Involvement in planning, design, and monitoring of program by management and labor representatives.

How unions and other individuals and groups in the community (such as retired workers) can serve as resources to schools to improve youth orientation to the world of work and employment opportunities in the private sector.

Motivation: Increased union membership, community consciousness, and personal satisfaction.

Barriers:

a. Fear of cheap labor competition.

b. Competition with union sponsored apprenticeship programs (usually limited to unionized employment).

c. Difficulty to reach interested helpers.

Proposals:

a. A mix of formal in-school and on-the-job training which clarifies the latter as an externship, rather than an apprenticeship.

b. Providing students pre-trained to be worth more than minimum wage, reducing the wage undercut argument.

c. Using senior citizens as mentors to students preparing them individually to understand work attitudes and employment opportunities.

d. Interesting specific industries (i.e., agriculture, commercial fishing) to stage "community awareness" events which are job opportunity oriented.

How needed special support services to in-school youth at private sector jobs can be arranged and provided.

Motivation: To industry-- none.

To school and community– extending training opportunities to students with special barriers.

Barriers:

a. Behavioral.

b. Financial.

c. Logistic (no car, poor living quarters, etc.)

d. Past life experiences and personal problems.

Proposals:

a. Special arrangements with graduate clinical counseling program conducted in real-world community utilizing graduate students as low-cost counselors.

b. Well structured student aid services.

c. Employer contracts to assist in obtaining small commercial loans to pay back after training with resulting wage increase.

d. Use of mentors to render personal assistance.

e. Personal growth seminar conducted by clinical counselors as a required in-school program.

How skills can be learned that are transferable and not just plant specific.

Motivation: To industry – flexible work force, more responsive to task changes and re-training requirement

To students– higher employment flexibility and growth potential.

Barriers:

a. Vagueness of most industry job descriptions in terms of competence based trainee systems.

b. Industry and student preference toward brief, tangible result-oriented, instead of task fundamental training.

Proposal: By the vehicle of task analysis, interdisciplinary comparison can be conducted which separates job or plant specific skills from transferable abilities. CRTs can be constructed which measure student achievement in each category and curricula can be made sensitive to choice of emphasis.

How students can be helped to avoid unreal expectations of future employment.

Motivation: To industry - less personnel turnover.

To school-- higher probability of student remaining on the job.

Barriers: Instructional environment, non-representative of actual conditions.

Proposals:
a. Special counseling by peers already working.
b. Realist learning environment.
c. Pre-apprenticeship counseling.

How new methods and flexible approaches can be developed for youth to learn about and prepare for apprenticeable trades.

Motivation: Increased skill labor pool because of larger number of graduates from the program.

Barriers
a. Conventional ways of student recruitment.
b. Parochial ways of designing the educational encounter.
c. Unflexible college calendars limiting frequency of enrollment opportunities and unresponsive to various instructional task/time requirements.

Proposals:
a. Involving profit-motivated student recruitment companies for community outreach.
b. Designing the educational encounter from one to one, to student directed work sessions, formal classes and informal apprenticeships, to be suitable to the learning objective.
c. Using a modular calendar, permitting new classes to start every 3 or 4 weeks and sensitive to specific task/time relationships.

Lower program cost by using industry equipment.

Motivation: To industry-- a work force accustomed to equipment used under actual conditions, trained by actual operators.

Barriers:
a. Time availability.
b. Special insurance.
c. Marginal use.

Proposals:
a. Flexible class hour scheduling.
b. School based liability insurance and special safety arrangement.
c. Thorough advanced preparation of students, to maximize learning gained by actual use.

How to make programs and curricula sensitive to anticipated labor and technology conditions, to assure future graduation criteria to be current with existing conditions.

Motivation: To industry--

a. To minimize up-date training.
b. To make future requirements known to education so that instruction can prepare for anticipated needs, rather than react to the past.

Motivation: To students to graduate with education current to the state of the profession.

Barriers: a. Motivating small and medium size enterprises to think in future terms.

b. Providing the guidance, technology and communications to conduct effective investigation and evaluation.

Proposals: a. Using the personnel and physical resources of the school to stimulate industry-wide dialogue on all operational levels.

b. Collaborating with governmental agencies involved in forecasting.

How youth can be helped to overcome the frustrations of pursuing career plans.

Motivations: Increased opportunity of matching the right person to the job; avoiding cost ineffectiveness of hiring over- or under-qualified personnel.

Barriers: a. Lack of communication between employers/job seekers, training institutions and counselors.

Proposals: a. Long-range planning efforts shared by school and employers.

b. Post graduation job adjustment counseling by school, peers, and former graduates

ORGANIZATIONAL QUESTIONNAIRE

Because of the diversity of organizations sharing in this project, it would be too cumbersome to design a questionnaire equally addressing all participants. Please use this page as a guideline, but feel free to adapt it to use data in any way you find suitable.

I Description of Organization:

Please list services or products offered by the organization.

II. Description of Basic Operations:

Please describe in general terms activities performed by yourself, your associates or employees in:

- administration
- production
- marketing
- other

III. Description of Employees' Qualifications:

Please outline special professional requirements for your employees, as they relate to the training objectives of this school.(You may distinguish between available and desired competency levels.)

IV. Definition of Gain:

Please provide some concepts of how your organization could gain from the existence of a school such as this.

- directly
- indirectly (by contributing to the industry as a whole.)

V Training Resources:

Please list physical and personnel resources your organization might make available for training.